Abel Smith,

WOODHALL PARK.

F.408

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F408

THE

VEGETABLE SYSTEM.

OR,

The INTERNAL STRUCTURE

AND

The LIFE of PLANTS;

Their PARTS, and NOURISHMENT, Explained;

THEIR

CLASSES, ORDERS, GENERA, and SPECIES,

Aſcertained, and Deſcribed;

In a METHOD altogether NEW:

COMPREHENDING

AN ARTIFICIAL INDEX,

AND

A NATURAL SYSTEM.

With FIGURES of all the PLANTS; Deſigned and Engraved by the AUTHOR.

The Whole from NATURE only.

By JOHN HILL, M. D.

MEMBER OF THE IMPERIAL ACADEMY, &c. &c.

VOL. III.

Containing the Two ENTIRE CLASSES of PLANTS with TUBULATE and LIGULATE FLOWERS.

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M.DCC.LXXII.

CHARACTERS of the Second Class.

1

A Tubulated Floret without it's Chives.

2

A Tubulated Floret with it's Chives and Stile.

3

A Tubulated Floret cut open.

4

The Chives separated from the Floret.

5

The Chives with the Style.

6

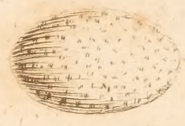
The Chives with one separated?

7

A Common Cup.

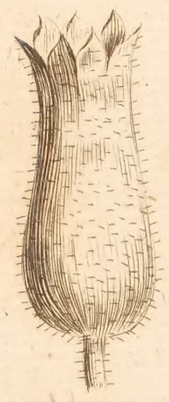
8

A Cup with the Receptacle.



9

The Receptacle.



10

An Entire Cup.

11

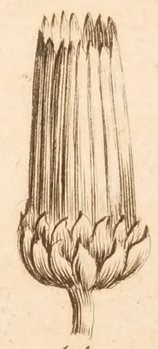
A Simple Cup.

12

A Double Cup.

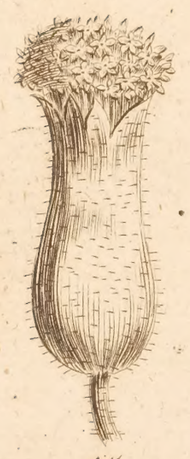
13

A Tiled Cup.



14

A Fring'd Cup.



15

African Fleabane in its Cup.

16

Hemp Agrimony in its Cup.

17

Mayweed in its Cup.

18

Fleabane in its Cup.

19

Groundsel in its Cup.

HERBS.

SERIES I.

With UNITED CHIVES.

CLASS II.

With ASSEMBLED TUBULATED FLORETS, DESTITUTE of RAYS.

Of the Orders or Subdiviſions of the SECOND CLASS.

THE Plants of the ſecond Claſs, altho' very diſtinct in their Appearance from thoſe of the firſt, are nearly allied to them in nature: the want of rays, tho' an obvious character, is ſlightly founded in reality: for a ray is no more than a tubulated Floret, with two of its ſegments united, and grown out in length: however, as it is a plain, viſible, and very obvious mark of difference, it is perfectly ſuited to be the character of a Claſs in this artificial Index. It is conſtant in the greater part of the Genera and Species; but, where it varies, the accident will occaſion no diſturbance or confuſion in our method; for the Bifront Genus, or ſingle Plant, will have its place in both the Claſſes. This will be ſeen in the Bidens, in our preceding, and following pages.

THE Plants of theſe two Claſſes being ſo much allied, and Nature, always ſimilar in like inſtances, they become ſubject to the ſame ſubdiviſion: there are Plants of this Claſs, with Cups, containing all the differences of the laſt; and they may therefore be arranged under five orders of the ſame exact determination.

THE annexed Plate gives inſtances of all the orders, with the Cups empty; and with their Flowers: and to ſave references to the preceding claſſical Plate, we have here added the conſtruction alſo of the tubular Floret, entire and diſſected, and its ſeparated Filaments. See Plate 87. Fig. 1, 2, 3, 4. 5, 6.---

A CUP is alſo repreſented entire at Fig. 7. the ſame cut open to ſhew its Receptacle at Fig. 8. and the Receptacle, or general Bed of the Florets at Fig. 9. This repetition may be uſeful here; at once to impreſs the diſtinction of Claſſes, and Orders on the mind. In the ſucceeding Arrangements it will not be needful.

THE five Orders of the ſecond Claſs are exemplified in the following inſtances.

ORDER I.

With the general Cup entire, as in the TARCHONANTHUS, Plate 87. Fig. 10 and 15.

ORDER II.

With the general Cup ſimple, as in Bidens, Fig. 11 and 16.

ORDER III.

With the general Cup double, as in COTULA, Fig. 12 and 17.

ORDER IV.

With the general Cup tiled, as in CONYZA, Fig. 13 and 18.

ORDER V.

With the general Cup fringed, as in SENECIO, Fig. 14 and 19.

THE firſt of theſe Figures always expreſſes the Cup alone: the ſecond with its Florets in it.

HERBS.

SERIES I.

With UNITED CHIVES.

CLASS II.

With ASSEMBLED TUBULATED FLORETS DESTITUTE of RAYS.

ORDER I.

With the GENERAL CUP ENTIRE.

Of this Order we know but one Genus; and of that only a ſingle Plant.

GENUS I.

AFRICAN FLEABANE.

TARCHONANTHUS.

Character of the Genus.

The Cup is rounded at the Baſe, narrow at the neck, and cut lightly into ſeven Segments at the rim.

1. SCENTED AFRICAN FLEABANE.

Plate 88. Fig. 1.

Character of the Species. Tarchonanthus camphoratus.

The Leaves are rugged, and the Flowers grow in a ſpike.

Plate 88. Fig. 1.

THIS is a Perennial, native of the Cape of Good Hope, a weak, but woody Plant, flowering in Auguſt. In the wild ſtate of nature it lies upon the ground, ſpreading its ſlight and ſtraggling Stalks every way to five or more feet diſtance; it is therefore we account it a woody Plant, and not a proper Shrub. In Europe, the gardener's art of tying it up to a ſtick, and trimming off its branches, raiſes with an upright, ſingle Stem, which, though too weak to ſtand alone, carries the aſpect of a Tree: they err in this, and pervert natural diſtinctions. The Leaves are of a duſky green on the upper ſide, and white underneath: the Flowers are of a blue purple, but they are ſeldom perfect with us: though they often ſhew themſelves: in Europe, what we uſually ſee is nothing more than a head of white and downy Buds. The Plant requires a green-houſe, and is eaſily propagated by cuttings.

ORDER

AFRICAN-FLEABANE.

Generic Character.

Scented African Fleabane?

HEMP-AGRIMONY.

Generic Character.

ORDER II.

With the general Cup ſimple, or compoſed of a ſingle row of Scales.

GENUS I.

HEMP AGRIMONY.

BIDENS.

Character of the Genus.

The Cup is broad: its Scales are equal, pointed, and hollowed lengthwiſe.

Plate 89. *a a b.*

1. TRIFID HEMP AGRIMONY.

Plate 89. Fig. 1. COMMON HEMP AGRIMONY.

Character of the Species. Bidens tripartita.

The Leaves are divided into three parts, and the Seeds ſtand erect.

Fig. 1. *a b.*

THIS is an Annual, common with us in wet places, flowering in Auguſt: it is a yard high. The Stalk is purpliſh: the Leaves are dark green: the Flowers are yellow. There is a leafy mantle under the Cups, which alſo many of the other Species have.

2. CONNATE HEMP-AGRIMONY.

Plate 89. Fig. 2. UNDIVIDED HEMP AGRIMONY.

Character of the Species. Bidens Cernua.

The Leaves grow in pairs, and unite at their Baſes, ſo that the Stalk runs through them.

Fig. 2. *a b.*

THIS alſo is an Annual, common in wet places, and flowers in July: the Stalk is reddiſh, the Leaves are deep green, and the Flowers are yellow: this has its Cup yellowiſh in the naked ſtate; and thus we ſee it about London: in the Iſle of Ely it has Rays; we have figured it already in that ſtate, Plate 18. Fig. 1.

3. TWICE-WING'D HEMP-AGRIMONY.

Plate 89. Fig. 3.

Character of the Species. Bidens bipinnata.

The Leaves are twice winged, and their Segments cut again: the Seeds ſtand divergent.

Fig. 3. *a b.*

THIS is an Annual, Native of Virginia, and flowers in Auguſt: the Leaves are yellowiſh: the Stalk is branched, and a yard high: the Flowers are yellow. This alſo is ſometimes imperfectly radiated; ſometimes very perfectly. See Plate 18.

4. JOINT-FLOWER'D HEMP AGRIMONY.

Plate 89. Fig. 4.

Character of the Species. Bidens nodiflora.

The Leaves are undivided: the Stalk ſplits fork-wiſe, and the Flowers have no Footſtalks.

Fig. 4. *a b c.*

THIS is an Annual, native of Bengal, a low Plant, flowering in July. The Stalk is reddiſh, and ten inches high. The Leaves are dark green, and the Flowers are yellow.

5. HAIRY HEMP AGRIMONY.

Plate 89. Fig. 5.

Character of the Species. Bidens piloſa.

The Leaves are winged and hairy, and the Seeds ſtand divergent.

Fig. 5. *d b.*

THIS is an Annual, native of America, a Plant of three feet high, flowering in Auguſt. The Stalk is brown: the Leaves are dark green, and the Flowers are yellow.

6. SNOWY HEMP AGRIMONY.

Plate 89. Fig. 6.

Character of the Species. Bidens nivea.

The Leaves are trilobate, but ſimple toward the top. The Flowers ſtand on long Footſtalks.

Fig. 6. *a b.*

THIS is a Perennial, native of Carolina, and flowers in June; a very beautiful Plant: it is four feet high: the Stalk is reddiſh: the Leaves are dark green and rough, and the Flowers are white, but the Buds red.

7. DWARF HEMP AGRIMONY.

Plate 89. Fig. 7. PETTY BIDENS.

Character of the Species. Bidens Minima.

The Leaves are oval, and the Stalk ſupports only one Flower.

Fig. 4. *a b.*

THIS is a petty Plant of our own country: it flowers in Auguſt: the Stalk is brown: the Leaves are pale green, and the Flowers are yellow.

THE radiated Hemp Agrimonies have been figured before, Plate 18.

GENUS II.
MAUDLIN.
AGERATUM.

Character of the Genus.

The Cup is long, and drawn in at the mouth: the Scales are numerous, lanced, and equal. Plate 90. *a b.*

1. OVAL-LEAV'D MAUDLIN.
Plate 90. Fig. 1.

Character of the Species. Ageratum ciliare.

The Leaves are oval, obtuſe, and crenated; and the Stalk is ſmooth. Fig. 1. *a b.*

THIS is an Annual, native of Biſnagar, and flowers in Auguſt. The Stalk is whitiſh: the Leaves are of a faint but pleaſant green: the Flowers are white.

2. TALL MAUDLIN.
Plate 90. Fig. 2.

Character of the Species. Ageratum altiſſimum.

The Leaves are oval, a little hearted at the Baſe, ſerrated, and ſharp-pointed; the Stalk is ſmooth. Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, and flowers in Auguſt: the Stalk is tinged with red: the Leaves are of a duſky green, and the Flowers are white.

3. HAIRY STALK'D MAUDLIN.
Plate 90. Fig. 3.

Character of the Species. Ageratum conyzoides.

The Stalk is hairy: the Leaves are oval, ſharp-pointed, and dented. Fig. 3. *a b.*

THIS is an Annual, native of America, a low Plant, flowering in Auguſt: the Stalk is firm and green: the Leaves are dark green; and the Flowers are white, with a bluſh of crimſon.

GENUS III.
BUTTERBURR.
PETASITES.

Character of the Genus.

The Cup is egg ſhaped: the Scales of it are narrow, filmy, numerous, and unequal.

1. OVAL-HEADED BUTTTERBURR.
Plate 90. Fig. 4. COMMON BUTTERBURR.

Character of the Species. Tuſſilago Petaſites dicta.

The Flowers are numerous, deſtitute of Footſtalks, and ſtand in a thick ſhort Spike. Fig. 4. *a b.*

THIS is a Perennial, native of our wet grounds, a Plant of eminent but neglected virtues, flowering in April: the Stalk is ten inches high, thick and reddiſh, and has a few Films of the ſame colour: the Flowers are white, with a ſlight bluſh of crimſon. The Leaves appear as the Flowers fade, and grow to two feet in diameter. The root cures malignant fevers.

2. LONG SPIKED BUTTERBURR.
Plate 90. Fig. 5. FOOTSTALK'D BUTTERBURR.

Character of the Species. Tuſſilago hybrida.

The Flowers have long, branchy, and filmy Footſtalks. Fig. 5. *a b.*

THIS is a Perennial, native alſo of our wet grounds, and flowers in March. The Stalk is a foot and a half high, tender, reddiſh, and filmy. The Flowers are pale crimſon: the Leaves are vaſt, and appear in April and May.

3. LOOSE SPIKED BUTTERBURR.
Plate 90. Fig. 6.

Character of the Species. Tuſſilago alba.

The Flowers ſtand in a looſe ſhort Spike, on divided naked Footſtalks. Fig. 6. *a b.*

THIS is a Perennial, native of Germany, and flowers in April: the Stalk is pale, the Leaves are of a deep green, and the Flowers quite white.

*** LINNÆUS joins the Butterburr, and Coltsfoot in one Genus. Nature has connected; not united them. The Plant, Plate 19, No. 3. is intermediate between the two Genera.

ORDER

MAUDLIN.

BUTTERBURR

MAY - WEED.

Generic Character.

STONE- WORT

Generic Character.

Pinnalifi'd Maynveed.

Amplexicaul Maynveed.

Decurrent Stonevort.

Long - footstalk'd Stonevort.

Forked Stonevort.

Three-rib'd Stonevort.

White Stonevort.

ORDER III.

With the general Cup compoſed of Two Rows of Scales.

GENUS I.

MAYWEED.

COTULA.

Character of the Genus.

The Cup has two rows of broad, equal, expanded Scales, longer than the Florets.

Plate 91. *o a b.*

1. PINNATIFID MAYWEED.

Plate 91. Fig. 1.

Character of the Species. Cotula anthemoides.

The Leaves are pinnatifid, and their Segments are ſubdivided. Fig. 1. *a b.*

THIS is a Perennial, native of Spain and Italy, and flowers in May; a weak, low, and unregarded Plant, though of ſufficient ſingularity. The Stalks lean on the ground, and are not more than ſeven or eight inches in length: the Leaves are of a deep and duſky green, and the Flowers are yellow: they are ſmall; but their large Cup, which is often tinged with crimſon, renders them conſpicuous.

2. AMPLEXICAUL MAYWEED.

Plate 91. Fig. 2.

Character of the Species. Cotula coronopifolia.

The Leaves embrace the Stalk, and are pinnatifid with ſimple Segments.

Fig. 2. *a b.*

THIS is a native of Africa, and of ſome parts of Europe; an Annual, a low and little regarded Plant, flowering in May and June. The Stalks are weak, and not more than ſix inches in length: the Leaves are of a browniſh green, and the Flowers are yellow.

GENUS II.

STONEWORT.

VERBESINA.

Character of the Genus.

The Cup is hollowed; the Scales are numerous, ſlender channel'd and nearly equal.

Plate 91. *o o a b.*

1. DECURRENT STONEWORT.

Plate 91. Fig. 3.

Character of the Species. Verbeſina alata.

The Leaves run down the Stalk. Fig. 3. *a b.*

THIS is a Perennial, native of Curaſſo, and flowers in June: the Stalk is brown, and two foot high; the Leaves are of a duſky green, the Flowers are of an orange yellow.

2. LONG FOOTSTALK'D STONEWORT.

Plate 91. Fig. 4.

Character of the Species. Verbeſina pſeudo acmella.

The Leaves ſtand in pairs, and are lanced and ſerrated: the Flower-ſtalks are long. Fig. 4. *a b.*

THIS is an Annual, native of Ceylon, and flowers in June: the Stalk is ſlender and yellowiſh: the Leaves are of a yellow green, and the Flowers pale yellow.

3. FORKED STONEWORT.

Plate 91. Fig. 5.

Character of the Species. Verbeſina Acmella dicta.

The Stalk ſplits forkwiſe; and the Flowers ſtand in the diviſions: the Leaves have Footſtalks. Fig. 5. *a b.*

THIS alſo is an Annual, native of Ceylon: the famous Acmella, whoſe ſeeds cure the gravel: it is a foot and a half high: the Stalks are reddiſh: the Leaves are of a freſh green, and the Flowers are yellow.

4. THREE RIB'D STONEWORT.

Plate 91. Fig. 6.

Character of the Species. Verbeſina Lavenia.

The Leaves are oval, and ſmooth, and have three conſpicuous ribs.

Fig. 6. *a b.*

THIS is an Annual, native of Ceylon, and flowers in July: the Stalk is two feet high, and browniſh: the Leaves are of a freſh green, and the Flowers are yellow.

5. WHITE STONEWORT.

Plate 91. Fig. 7.

Character of the Species. Verbeſina alba.

The Leaves ſtand in pairs: they are lanced, and ſharply ſerrated.

Fig. 7. *a b.*

THIS is a Biennial, native of Virginia, and flowers in Auguſt: it is a foot high: the Leaves are freſh green; and the Flowers are white.

The radiated Verbeſinas have been deſcribed, page 60. plate 26.

ORDER

ORDER IV.

With the general Cup tiled, or compoſed of ſeveral ſeries of Scales.

GENUS I.

1. LAVENDER COTTON.

SANTOLINA.

The Cup is hæmiſpheric; its Scales are oblong, oval, and unequal, with ſharp tops turning inward. Plate 92. *a a b.*

1. SQUARE LEAV'D LAVENDER COTTON.

Plate 92. Fig. 1. FEMALE SOUTHERNWOOD, or LAVENDER COTTON.

Character of the Species. Santolina chamæcypariſſus.

The Leaves are ſquare and dented: the Flowers ſtand ſingle.

Fig. 1. *a b.*

THIS is a ſmall Perennial woody Plant; a native of the warmer parts of Europe, and flowers at Midſummer: The Leaves are of an aſhy green, and ſtrong ſcented. The Flowers are ſmall and pale.

2. SINUATED LAVENDER COTTON.

Plate 92. Fig. 2.

Character of the Species. Santolina dentata.

The Leaves are ſinuated; and the Flowers grow in a compound cluſter.

Fig. 2. *a b.*

THIS is a Perennial woody Plant, native of Æthiopia, and flowers throughout the year: the Bark is pale; the Leaves on the lower part of the ſhoots are deeply divided, long and narrow: thoſe toward the tops are broader, and but lightly notched: the Flowers are yellow.

3. ROSEMARY LEAV'D LAVENDER COTTON.

Plate 92. Fig. 3.

Character of the Species. Santolina Roſmarini-folia.

The Leaves are linear and dented: the Flowers ſtand on long Footſtalks.

Fig. 3. *a b.*

THIS is a Perennial woody Plant, native of Spain, and flowers all Autumn: the Stem is brown: the branches green: the Leaves are of a deep green: the Flowers are yellow.

4. THREE FORK'D LAVENDER COTTON.

Plate 92. Fig. 4.

Character of the Species. Santolina trifurca.

The Leaves are wedg'd, and cut in three at the end: the Flowers grow in a ſimple cluſter.

THIS is a Perennial, native of Æthiopia, a woody Plant, flowering all the year. The Boughs are variouſly divided; but all their tops are crowned with cluſters of large golden Flowers; on ſimple Footſtalks.

5. SAMPIRE LEAV'D LAVENDER COTTON.

Plate 92. Fig. 5.

Character of the Species. Santolina crithmi folia.

The Leaves are linear, and cut in threes: the Flowers ſtand in a ſingle cluſter.

Fig. 5. *a b.*

THIS is an Æthiopian woody Plant, ſix feet high; flowering at all ſeaſons. The Leaves are of a faint green; they are cut into three at the end: the Flowers are large and yellow.

6. JAGGED CUP'D LAVENDER COTTON.

Plate 92. Fig. 6.

Character of the Species. Santolina crenata.

The Scales of the Cup are jagged: one Flower ſtands at the top of the Plant.

Fig. 6. *a b.*

THIS alſo is an Æthiopian: a Perennial Plant. The Leaves are of a faint blue green: the ſhoots are tough: the Flower is yellow.

7. ANNUAL LAVENDER COTTON.

Plate 92. Fig. 7.

Character of the Species. Santolina annua.

The Leaves are pinnatifid, and the Lobes are cut: the Flowers ſtand in a ſimple ſpike.

Fig. 7. *a b.*

THIS is an Annual, native of Africa. The Stalk is tender: the Leaves are pale green: the Flowers are yellow.

LAVENDER COTTON.

Square leav'd Lavender Cotton.

Generic Character

Three fork'd Lavender Cotton.

Sinuated Lavender Cotton?

Rosemary-leav'd Lavender Cotton?

Samphire-leav'd Lavender Cotton.

Jagg'd cup'd Lavender Cotton.

Annual leav'd Lavender Cotton.

TANZY.

Generic Character.

Twice-wing'd Tanzy.

Pinnatifi'd Tanzy.

Fork'd Tanzy.

Woolly-headed Tanzy.

Fine-wing'd Tanzy.

Downy Tanzy

Feathery Tanzy.

Oval-leav'd Tanzy.

GENUS II.
TANZY.
TANACETUM.

Character of the Genus.

The Cup is rounded at the baſe, and cylindric upwards; and is compoſed of ſharp pointed, narrow, and equal Scales, placed cloſe, with the tops ſtrait.

Plate 93. Fig. *o a b.*

1. TWICE WING'D TANZY.

Plate 93. Fig. 1. COMMON TANZY.

Character of the Species. Tanacetum vulgare.

The Leaves are winged; and the Leafits winged again, and jagged.

Fig. 1. *a b.*

THIS is a Perennial, native of the northern parts of Europe; and flowers in Auguſt. The Leaves are of a fine green: the Stalk is a yard high: the Flowers are of a bright yellow.

2. PINNATIFID TANZY.

Plate 93. Fig. 2.

Character of the Species. Tanacetum fruteſcens.

The Leaves are pinnatifid; and the Segments are undivided, and obtuſe.

Fig. 2. *a b.*

THIS is a woody Plant, native of Æthiopia; and flowers in Auguſt. The Stem is grey: the Shoots are green: the Leaves are of a blueiſh green: the Flowers are of a delicate yellow.

3. FORKED TANZY.

Plate 93. Fig. 3.

Character of the Species. Tanacetum crithmifolium.

The Leaves are winged, and forked; the Leafits linear, and far aſunder.

Fig. 3. *a b.*

THIS is a Perennial, native of the Cape; and flowers great part of the year. The Stem is brown: the young Shoots are reddiſh: the Leaves are freſh green: and the Flowers are yellow.

4. WOOLLY HEADED TANZY.

Plate 93. Fig. 4. SOFT GOLDILOCKS.

Character of the Species. Tanacetum annuum.

The Leaves are twice pinnatifid; the heads of the Flowers are downy.

Fig. 4. *a b c.*

THIS is an Annual, native of the South of Europe; and flowers in Auguſt. The Leaves are pale green: the Stalk is two feet high: the Flowers are yellow.

5. FINE WING'D TANZY.

Plate 93. Fig. 5.

Character of the Species. Tanacetum Sibiricum.

The Leaves are winged; the Leafits linear; and the Florets are cut ſlightly.

Fig. 5. *a b.*

THIS is a Perennial, native of the colder regions; and flowers in Auguſt. The Stalk is two feet high: the Leaves are of a pale green: the Flowers are yellow.

6. DOWNY TANZY.

Plate 93. Fig. 6.

Character of the Species. Tanacetum incanum.

The Leaves are twice winged, and downy: the Flowers form an oval cluſter.

Fig. 6. *a b.*

THIS is a Perennial, native of the Eaſt; and flowers in Autumn. The Stalk is a yard high; and the Leaves are downy: the Flowers are yellow, and grow in upright oval cluſters.

7. FEATHERY TANZY.

Plate 93. Fig. 7.

Character of the Species. Tanacetum ſuffruticoſum.

The Leaves are cut into feathery Segments in the winged manner.

Fig. 7. *a b.*

THIS is a Perennial, a woody Plant, native of Æthiopia. The Stem is brown; and the young Shoots are green: the Leaves are pale; and the Flowers are ſmall, and yellow.

8. OVAL-LEAV'D TANZY.

Plate 93. Fig. 8. COSTMARY.

Character of the Species. Tanacetum balſamita dictum.

The Leaves are oval, and undivided.

THIS is a Perennial, native of Tuſcany; and flowers in June. The Leaves are of a fine green: the Flowers are yellow: the Plant is four feet high, upright, and not branched.

GENUS III.
GOLDILOCKS.
CHRYSOCOMA.

Character of the Genus.
The Cup is hæmiſpheric, but ſpreads at the top; the Scales are lanced, and placed very even. Plate 94. *a a b.*

1. LINEAR GOLDILOCKS.
Plate 94. Fig. 1.

Chryſocoma Linoſyris.

Character of the Species.
The Leaves are linear, but have ſome breadth: the Scales of the Cups ſtand looſe. Fig. 1. *a b.*

THIS is a Perennial, native of the South of Europe; and flowers in July. The Stalk is reddiſh: the Leaves are of a freſh green: the Flowers are yellow.

2. EYELASH'D GOLDILOCKS.
Plate 94. Fig. 2.

Chryſocoma ciliata.

Character of the Species.
The Leaves are ſimple, rugged, and edged with ſtiff ſhort hairs. Fig. 2. *a b.*

THIS is a Perennial, native of Æthiopia. The Stem is brown: the Branches are reddiſh: the Leaves are of a ruddy green: the Flowers are yellow.

3. GRASSY GOLDILOCKS.
Plate 94. Fig. 3.

Chryſocoma graminifolia.

Character of the Species.
The Leaves are lanced, but very long: the Flowers ſtand in a divided cluſter. Fig. 3. *a b.*

THIS is a Perennial, native of America; and flowers in Autumn. The Stalk is two feet high: the Leaves are graſſy green: the Flowers are yellow.

4. HAIRY GOLDILOCKS.
Plate 94. Fig. 4.

Chryſocoma villoſa.

Character of the Species.
The Leaves are lanced, and hairy; and the Cups are ſlender. Fig. 4. *a b.*

THIS is a Perennial, native of Siberia; and flowers in Auguſt: a tall, ſlender Plant. The Stalk is grey: the Flowers are pale yellow.

5. DECURRENT GOLDILOCKS.
Plate 94. Fig. 5.

Character of the Species. Chryſocoma-coma aurea dicta.
The Leaves are linear, and run down the Stalk. Fig. 5. *a b.*

THIS is a Perennial, an Æthiopian Plant, with gold yellow Flowers, which blow in June. The Stem is brown: the young Shoots purple: and the Leaves are of a fine green.

6. DROOPING GOLDILOCKS.
Plate 94. Fig. 6.

Character of the Species. Chryſocoma cernua.
The Leaves are linear, and hairy: the Buds of the Flowers droop. Fig. 6. *a b.*

THIS is a woody Plant of Æthiopia; flowering in Auguſt. The Stem is brown: the Shoots are green: the Leaves are linear, of a fine green, but pale underneath: the Flowers are yellow.

7. DOTTED GOLDILOCKS.
Plate 94. Fig. 7.

Character of the Species. Chryſocoma biflora.
The Leaves are lanced; they have three ſtrong Ribs, and are dotted with black. Fig. 7. *a b.*

THIS is a Perennial, native of Siberia; a Plant of a yard high. The Leaves are green, with brown ſpots: the Flowers are yellow.

Generic Character.

Linear Goldilocks.

Eye-lash'd Goldilocks.

Hairy Goldilocks.

Grassy Goldilocks.

Decurrent Goldilocks.

Drooping Goldilocks.

Dotted Goldilocks.

FLEABANE.

Amplexicaul Fleabane.

Tortuous Fleabane?

Hairy Fleabane?

Brown Fleabane?

Soft-leav'd Fleabane?

Slender-stalk'd Fleabane?

Grey Fleabane?

Woolly Fleabane?

Lobated Fleabane?

GENUS IV.
FLEABANE.
CONYZA.

Character of the Genus.

The Cup is rounded at the bottom, but contracts and becomes cylindric upwards: its Scales are pyramidal, and turn out at the points. Plate 95. *o a b.*

1. AMPLEXICAUL FLEABANE.

Plate 95. Fig. 1.

Character of the Species. Conyza bifrons.

The Leaves are oblong, oval, and embrace the Stalk. Fig. 1. *a b.*

THIS is a native of the Pyrenæan mountains, and of Canada. It is a Perennial; four feet high; flowering in June. The Leaves are of a browniſh green; and the Flowers yellow.

2. TORTUOUS FLEABANE.

Plate 95. Fig. 2.

Character of the Species. Conyza tortuoſa.

The Stem is wreathed: the Leaves are oval; and the Flowers droop. Fig. 2. *a b c.*

THIS is a woody Plant, native of Madagaſcar; flowering in July. The Stem is reddiſh: the Shoots are green: the Leaves are of a freſh green: and the Flowers are yellow.

3. HAIRY FLEABANE.

Plate 95. Fig. 3.

Character of the Species. Conyza hirſuta.

The Leaves are oblong, oval, and undivided, rugged, and hairy underneath. Fig. 3. *a b.*

THIS is a Perennial, native of China; flowering in June. The Stem is pale: the Leaves are alſo pale, and hairy underneath: the Flowers are yellow.

4. BROWN FLEABANE.

Plate 95. Fig. 4. PLOWMAN'S SPIKENARD.

Character of the Species. Conyza ſquarroſa.

The Leaves are lanced, rugged, and ſharp pointed: the Cups are rough. Fig. 4. *a b c.*

THIS is an Annual, native of our way ſides; and flowers in June. The Leaves are broad, rough, and brown: the Flowers are yellow. The Plant is three feet high.

5. SOFT-LEAV'D FLEABANE.

Plate 95. Fig. 5.

Character of the Species. Conyza bifoliata.

The Leaves are downy, oval, and indented: two grow with each Flower. Fig. 5. *a b.*

THIS is an Annual, native of the Indies, a foot and a half high; flowering in June. The Leaves are of a grey green: the ſide Shoots only have two ſmall Leaves, placed oppoſite: the Flowers are crimſon.

6. SLENDER-STALK'D FLEABANE.

Plate 95. Fig. 6.

Character of the Species. Conyza Chinenſis.

The Leaves are lanc'd, ſerrated, and downy: the Flowers ſtand only on the top. Fig. 6. *a b.*

THIS is an Annual, native of China; flowering in Auguſt. The Leaves are broad: the Stalk is two feet and a half high; the Leaf-ſtalks are hoary underneath: the Flowers are yellow.

7. GREY FLEABANE.

Plate 95. Fig. 7.

Character of the Species. Conyza cinerea.

The Leaves are oblong; and the Flowers grow in a branchy flat cluſter. Fig. 7. *a b.*

THIS is an Annual, native of the Indies; a yard high. The Leaves are of a greyiſh green: the Flowers are yellow.

8. WOOLLY FLEABANE.

Plate 95. Fig. 8.

Character of the Species. Conyza candida.

The Leaves are egg'd, and woolly; the Flowers grow on the top, and Branches. Fig. 8. *a b.*

THIS is a native of Crete; a Perennial, woody Plant, of two feet high; flowering all ſummer. The Leaves are of a white green: the Flowers are yellow.

9. LOBATED FLEABANE.

Plate 95. Fig. 9.

Character of the Species. Conyza lobata.

The Leaves are cut into three divided Lobes. Fig. 9. *a b.*

THIS is a woolly Plant, native of Vera Cruz. The Leaves on their lower parts are divided deeply into three: thoſe near the top are ſimple, and entire: they are of a pale green: the Flowers are yellow.

GENUS V.

SPIKENARD.

BACCHARIS.

Character of the Genus.

The Cup is cylindric, and compoſed of narrow, linear, pointed Scales, which ſtand upright, and have their Points armed with a harmleſs Spine. Plate 96. *a a b.*

1. DEEP-CUT SPIKENARD.

Plate 6. Fig. 1.

Baccharis ivæfolia.

Character of the Species.

The Leaves are lanced; and very ſharply and deeply indented: the Stem is woody. Fig. 1. *a b.*

THIS is a robuſt Plant, native of North and South America. The woody Stem is reddiſh: the Leaves are deep green: the Flowers are white. It flowers all ſummer.

2. OVAL-LEAV'D SPIKENARD.

Plate 96. Fig. 2.

Baccharis Indica.

Character of the Species.

The Leaves are oval, and lightly dented: the Flowers grow in a vaſt regular cluſter. Fig. 2. *a b.*

THIS is a Perennial, native of the Eaſt Indies; and flowers all the year. The Stem is brown: the Leaves are pale green: and the Flowers are yellow.

3. SLIGHT DENTED SPIKENARD.

Plate 96. Fig. 3.

Baccharis Neriifolia.

Character of the Species.

The Leaves are lanced, and have a dent or two near their points. Fig. 3. *a b.*

THIS is an Æthiopian, a woody Plant, flowering in Autumn. The Stem is pale: the young Shoots are green: the Leaves are of a freſh green: the Flowers are yellow.

4. BLUE-GREEN SPIKENARD.

Plate 96. Fig. 4.

Character of the Species.

Baccharis halimifolia.

The Leaves are egg-ſhap'd, and dented deepeſt toward the end. Fig. 4. *a b.*

THIS is a Perennial, native of Virginia: it flowers toward the end of ſummer. The Stalk is two feet high: the Leaves are duſky: the Flowers are yellow.

5. THIN-LEAV'D SPIKENARD.

Plate 96. Fig. 5.

Character of the Species.

Baccharis tenuifolia.

The Leaves are lanced, but ſomewhat oval; they are remarkably thin: the Stem is woody. Fig. 5. *a b.*

THIS is a woody African Plant; flowering at all ſeaſons. The Stem is purpliſh; and the young Shoots are paler: the Leaves are of a faint green; and the Flowers of a pale red.

6. FOETID SPIKENARD.

Plate 96. Fig. 6.

Character of the Species.

Baccharis fœtida.

The Leaves are lanced, and very deeply cut; the tufts of Flowers have a leafy Baſe. Fig. 6. *a b.*

THIS is a robuſt and woody Plant, of North America. The Stem is brown: the young Shoots are green: the Leaves are of a ſtrong green: the Flowers are ſmall, and reddiſh.

SPIKENARD.

Generic Character.

Deep-cut Spikenard.

Oval-leav'd Spikenard?

Slight-dented Spikenard?

Blue-green Spikenard?

Thin-leav'd Spikenard?

Fœtid Spikenard?

DUTCH AGRIMONY.

GENUS VI.

DUTCH AGRIMONY.

EUPATORIUM.

Character of the Genus.

The Cup is oblong, and compoſed of upright, ſwelling, and ſharp pointed Scales, of irregular lengths.

a Thoſe with four Flowers in each Cup.

1. LINEAR DUTCH AGRIMONY.

Plate 97. Fig. 1.

Character of the Species. Eupatorium hyſſopiſolium.

The Leaves are linear, and have three ſtrong Ribs. Fig. 1. *a b.*

THIS is a ſingular, though but inelegant Plant, native of Virginia and Canada, and flowers from June to October. The firſt Leaves are long, narrow, and obtuſe, and divided at the edges, harſh to the touch, and of a duſky green. The Stalk is hard, brittle, ridg'd, of a whitiſh green, and two feet or more in height: its Leaves are oblong and narrow; but they ſwell a little toward the middle: they are of the ſame harſh green with thoſe from the root, and have three conſpicuous ribs: they are leſs obtuſe than thoſe from the root, and intirely undivided at the edges: the Stalk, and lower Leaves, are ſlightly hairy: thoſe toward the top of the Plant leſs ſo. The Flowers are ſmall and white.

2. CLUSTERY DUTCH AGRIMONY.

Plate 97. Fig. 2.

Character of the Species. Eupatorium ſcandens.

The Stalk twiſts about other Plants: the Leaves are hearted, and boldly cut at the edges. Fig. 2. *a b.*

THIS Species, which is ſingular and handſome both, is a native alſo of Virginia; common in wet places, and flowers all the latter part of ſummer: it is a Perennial, with a weak long Stalk, which, ſupporting itſelf by twining about whatever is near it, often riſes to a very conſiderable height. The Leaves are large, and of a delicate green, heart-ſhaped, indented at the edges, and ſharp-pointed: the Flowers grow in little tufts at the tops of all the branches, and are of a very delicate crimſon.

3. EGG-LEAV'D DUTCH AGRIMONY.

Plate 97. Fig. 3.

Character of the Species. Eupatorium houſtonianum.

The Stalk climbs, and the Leaves are egg-ſhaped, and undivided at the edges. Fig. 3. *a b.*

THIS is a Perennial, native of Vera Cruz; and flowers in a ſucceſſion many months, tho' not with any great beauty. The Stalk is round, but edged a little; weak, but tough; and, twining about any thing, will riſe to a very conſiderable height; ſometimes ten or twelve feet. The Leaves are of a fine gloſſy green; their ſhape is oval, and their ribs are conſpicuous, and often tinged with red: the Flowers grow upon the tops of all the Branches, not in tufts, but in looſe inconſiderable ſpikes, and are of a pale but delicate crimſon.

DUTCH AGRIMONY.

b Thoſe which have five Flowers in each Cup.

1. AURICULATED DUTCH AGRIMONY.

Plate 98. Fig. 1.

Character of the Species. Eupatorium Zeylanicum.

The Leaves are egg-ſhaped, but they have a kind of ears at the Baſe, which give them a ſpeary form. Fig. 1. *a b.*

THIS is a tall Plant, native of Ceylon: the firſt Leaves are of a deep green: they have on each ſide, near the Baſe, a ſmall ſlip of a leafy matter in the manner of an ear. The Stalk is of a whitiſh green: its Leaves are of a ſtrong green. The Flowers are ſmall and crimſon.

2. AMPLEXICAUL DUTCH AGRIMONY.

Plate 98. Fig. 2.

Character of the Species. Eupatorium ſeſſilifolium.

The Leaves are roundiſh, but ſomewhat lanced, and embrace the Stalk. Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, and flowers all ſummer: the Stalk is green and tender: the Leaves are of a pale green: they ſurround the Stalk. The Flowers are ſmall, but of a delicate crimſon.

3. TRIFOLIATE DUTCH AGRIMONY.

Plate 98. Fig. 3.

Character of the Species. Eupatorium trifoliatum.

The Leaves are lanced, ſerrated, and have Footſtalks; and they grow three together. Fig. 9. *a b.*

THIS is a Perennial, native of Virginia, an autumnal flowering Plant. The Stalk is a yard high, of a deep green, tinged with red. The Leaves are deep green: the Flowers are crimſon.

4. FINGER'D DUTCH AGRIMONY.

Plate 98. Fig. 4. COMMON DUTCH AGRIMONY.

Character of the Species. Eupatorium canabinum.

The Leaves are fingered, or grow ſeveral together from one point. Fig. 4. *a b.*

THIS is a Perennial, native of our ditch ſides, a ſpecious Plant, covered with Flowers in Autumn. The Stalk is five feet high: the Leaves are of a freſh green: the Flowers are of a pale but very delicate crimſon.

5. TALL DUTCH AGRIMONY.

Plate 98. Fig. 5.

Character of the Species. Eupatorium altiſſimum.

The Leaves are lanced, and have ſtrong Ribs: the Stem is woody. Fig. 5. *a b.*

THIS is a Perennial, native of Penſilvania. The Stem is woody: the branches are pale: the Leaves are of a freſh fine green: the Flowers are white.

6. FEW-LEAV'D DUTCH AGRIMONY.

Plate 98. Fig. 6.

Character of the Species. Eupatorium Chinenſe.

The Leaves are oval, deeply cut, and have Footſtalks: they ſtand remote on the Stalk. Fig. 6. *a b.*

THIS ſtraggling Plant is a native of the ſouthern parts of China, flowering all Autumn. The Stem is of a pale green: the Leaves are of a freſh green: the Flowers are of a pale Crimſon.

7. FINE CUT DUTCH AGRIMONY.

Plate 98. Fig. 7.

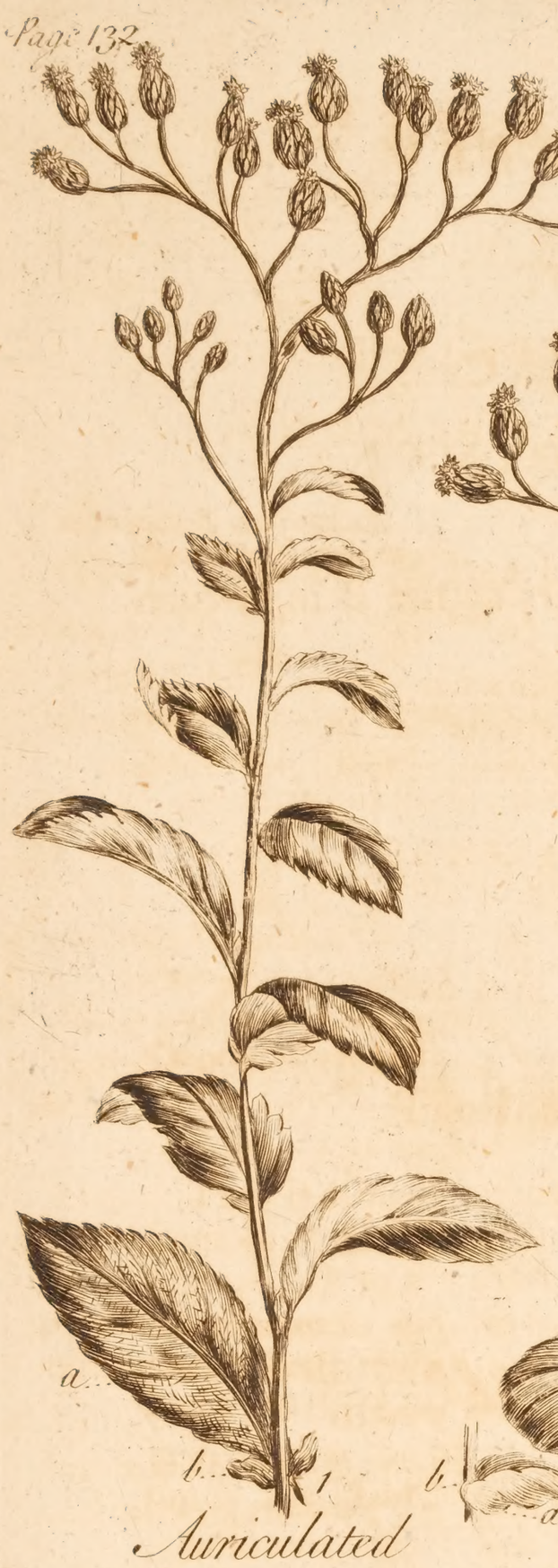
Character of the Species. Eupatorium ſeſſilifolium.

The Leaves have no Footſtalks: they are lanced, finely ſerrated, and embrace the Stalk. Fig. 7. *a b.*

THIS is a Perennial, native of Virginia, a tall robuſt Plant, flowering in July. The Leaves are of a freſh green: the Flowers are white.

c With

DUTCH AGRIMONY.



Auriculated Dutch Agrimony.

Amplexicaul Dutch Agrimony.

Trifoliate Dutch Agrimony.

Fingerd Dutch Agrimony.

Tall Dutch Agrimony.

Fen-leav'd Dutch Agrimony.

Fine cut Dutch Agrimony.

DUTCH AGRIMONY.

3

1

Crimson Dutch Agrimony.

2

Violet Dutch Agrimony.

3

Sweet Dutch Agrimony.

4

Connate Dutch Agrimony.

c With eight Flowers in each Cup.

1. CRIMSON DUTCH AGRIMONY.

Plate 99. Fig. 1.

Character of the Species. Eupatorium purpureum.

The Leaves are lanced and rugged, and have Footſtalks: they grow ſeveral at a Joint. Fig. 1. *a b.*

THIS is a Perennial, native of North-America, a robuſt Plant: the Stalk is four feet high, of a deep green, and ſpotted with a duſky crimſon. The Leaves ſtand three or more at a Joint, and are deep green: the Flowers are of a pure white, and have the Cups lightly tinged with red, and the Chives and Styles are red, which ſtand out beyond the Petals.

d Thoſe which have numerous Flowers in each Cup.

2. VIOLET DUTCH AGRIMONY.

Plate 99. Fig. 2.

Character of the Species. Eupatorium cœleſtinum.

The Leaves are oval, and hearted at the Baſe, and are bluntly ſerrated, and placed on Footſtalks. Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, an elegant Plant: the Stalk is four feet high: the Leaves are of a delicate and ſhining green: the Flowers are large, and of a violet blue.

3. SWEET DUTCH AGRIMONY.

Plate 99. Fig. 3.

Character of the Species. Eupatorium aromaticum.

The Leaves are oval, bluntly ſerrated, and placed on Footſtalks: they have three great Ribs: the Cups are very ſmooth. Fig. 3. *a b.*

THIS is a Perennial, native of Virginia, and flowers in Autumn: the Stalk is ſlender, and a yard and a half high. The Leaves are of a very ſtrong green, ſomewhat rough on the ſurface: they have three principal and conſpicuous Ribs. The Flowers are white, and have long tubes: the Cup is ſingular: the ſeveral ſeries of Scales are leſs diſtinct than in the others. In the order of Nature it joins the Ageratum and Eupatoriums. The whole Plant has an aromatic ſcent.

4. CONNATE DUTCH AGRIMONY.

Plate 99. Fig. 4.

Character of the Species. Eupatorium perfoliatum.

The Leaves grow together at their Baſes, and the Stalk grows thro' them. Fig. 4. *a b.*

THIS is a Perennial, native of Virginia, and flowers all Summer: the Stalk is upright, and near a yard high: the Leaves are of a pale green and ſoft; ſharp pointed and indented along the edges. The Flowers are of a very pale crimſon: they ſtand in ſmall looſe tufts at the top of the Stalk and of the Branches.

GENUS VII.
MUGWORT.
ARTEMISIA.

The Cup is ſhort and oval, compoſed of rounded Scales, turning in at the points, and laid cloſely over one another: and there is a kind of approach toward Rays in the Flower. Plate 100. *a a b.*

LINNÆUS firſt united the Wormwoods and Mugworts in one Genus; and it is done with juſtice. The Characters are moſt diſtinct in the Mugworts, and that has therefore a right to be continued as the generic name.

1. SHARP-CUT MUGWORT.

Plate 100. Fig. 2. COMMON MUGWORT.

Artemiſia vulgaris.

Character of the Species.

The Leaves are pinnatiſid, flatted, ſharp cut, and white underneath. The Flowers ſtand in ſimple cluſters. Fig. 1. *a b.*

THIS is a Perennial, native of our dry waſte grounds; a tall, robuſt, well-looking Plant, of four feet high. The Leaves are of a dark green on the upper ſide, and white underneath. The Flowers ſtand in long ſimple ſpikes, and are brown.

2. GREAT FLOWERED MUGWORT.

Plate 100. Fig. 2.

Artemiſia rupeſtris.

Character of the Species.

The Leaves are cut into fine linear Segments: the Flowers are large and open. Fig. 2. *a b.*

THIS is a woody low Plant, native of Sweden and Siberia. The Stem is whitiſh, and ſix inches high. The Leaves are ſilvery: the Flowers are tinged lightly with purple.

3. ROMAN MUGWORT.

Plate 100. Fig. 3. ROMAN WORMWOOD.

Artemiſia Pontica.

Character of the Species.

The Flowers hang drooping, and are roundiſh: the Leaves are finely cut, and whitiſh underneath. Fig. 3. *a b.*

THIS is the true Roman Wormwood: it is native of Europe and the Eaſt. The Stem is woody, brown, and two feet high: the Leaves are of a whitiſh green: the Flowers are roundiſh and brown.

4. WORMWOOD MUGWORT.

Plate 100. Fig. 4. COMMON WORMWOOD.

Artemiſia Abſynthium.

Character of the Species.

The Leaves are cut into broad Segments in the pinnatifid manner; and the Segments are crenated. Fig. 4. *a b.*

THIS is a Perennial, native of our waſte grounds, every where: it is a yard high: the Leaves are of a pale greyiſh green: the Flowers are brown.

5. LANCED LEAV'D MUGWORT.

Plate 100. Fig. 5. TARRAGON.

Artemiſia dracunculus.

Character of the Species.

The Leaves are ſimple, ſmooth, lanced, and undivided. Fig. 5. *a b.*

THIS is a Perennial, native of Tartary; two feet high, and flowers in July. The Leaves are of a fine green: the Flowers are brown.

6. GREEN FLOWER'D MUGWORT.

Plate 100. Fig. 6.

Character of the Species. Artemiſia tanacetifolia.

The Leaves are twice winged, deeply cut, and downy underneath. Fig. 6. *a b.*

THIS is a Perennial, native of Siberia, flowering in Auguſt: the Stalk is two feet high: the Leaves are greyiſh: the Flowers are oval, and of a pale green.

7. THREE FORK'D MUGWORT.

Plate 100. Fig. 7.

Character of the Species. Artemiſia Chinenſis.

The Leaves are ſimple, woolly, and cut into three at the end. Fig. 7. *a.*

THIS is a Perennial, native of the North of China: the Stalk is two feet high: the Leaves are whitiſh and downy: thoſe on the lower part are cut into three Segments at the point: the others are ſimple: the Flowers are brown.

8. GLO-

MUGWORT.

o
a.

Generic Character.

2

Great flower'd Mugwort.

3

Roman Mugwort.

4

Wormwood Mugwort.

1

Sharp-cut Mugwort.

5

Lanc'd-leav'd Mugwort.

6

Green-flower'd Mugwort.

7

Three-fork'd Mugwort.

MUGWORT.

8

Globular Mugwort.

9

Branchy-leav'd Mugwort.

10

Fleshy-leav'd Mugwort.

11

Slender-Spiked Mugwort.

12

Pinnated Mugwort.

13

Twiggy Mugwort.

14

Thrice winged Mugwort.

8. GLOBULAR MUGWORT.

Plate 101. Fig. 8.

Character of the Species. Artemisia Æthiopica.

The Leaves are linear, simply divided, and stand clustery: the Flowers are globular. Fig. 8. *a b.*

This is a Perennial, native of Æthiopia; a shrubby Plant, flowering all the year. The Stem is brown: the young Shoots are pale, and woolly: the Leaves are greyish: the Flowers are brown.

9. BRANCHY-LEAV'D MUGWORT.

Plate 101. Fig. 9. Male Southernwood.

Character of the Species. Artemisia abrotanum dicta.

The Leaves are cut into thready Segments in a various manner; and the Stalk is woody. Fig. 9. *a b.*

This is a woody Plant, native of Syria; flowering in July. The Stem is brown: the young Shoots are greyish: the Leaves are pale: the Flowers are brown.

10. FLESHY-LEAV'D MUGWORT.

Plate 101. Fig. 10.

Character of the Species. Artemisia crithmifolia.

The Leaves are composed of slender but fleshy parts; narrow, split, and divided. Fig. 10. *a b.*

This is a Perennial, a native of the sea coasts of Portugal; a hard and woody Plant, flowering in July. The Stem is brown, and eight or ten inches high: the Leaves are of a deep and glossy green, and their substance is fleshy: the Flowers are brown.

11. SLENDER SPIKED MUGWORT.

Plate 101. Fig. 11. The Wormseed Plant.

Character of the Species. Artemisia santonica.

The Leaves are multifid; and their Segments linear: the Spikes are simple; and the Flowers stand only on one side. Fig. 11. *a b.*

This is a native of Persia; a low but shrubby Plant; flowering in July. The Stem is brown: the young Shoots are grey, and downy: the Leaves are greyish: the Flowers are brown.

12. PINNATED MUGWORT.

Plate 101. Fig. 12.

Character of the Species. Artemisia palustris.

The Leaves are simply, and regularly winged: the Flowers stand clustered. Fig. 12. *a b.*

This is a Perennial, native of Siberia, and frequent there in damp places; flowering in August. The Stem is weak and green: the Leaves are whitish: the Flowers are yellow.

13. TWIGGY MUGWORT.

Plate 101. Fig. 13. Fineleaved Mugwort.

Character of the Species. Artemisia campestris.

The Shoots are fine slender twigs: the Leaves are cut into a multitude of linear segments. Fig. 13. *a b.*

This is a Perennial, native of our dry open grounds; flowering in June. The Stem is woody at the base, and leans upon the ground: the Leaves are of a browniſh green: the Flowers are pale.

14. THRICE WING'D MUGWORT.

Plate 101. Fig. 14.

Character of the Species. Artemisia annua.

The Leaves are thrice winged, and smooth: the Flowers are roundish, and hang drooping. Fig. 14. *a b.*

This is a Perennial, native of the mountains of Siberia. The Stalk is green, and two feet high: the Leaves are of a pale green: the Flowers are brown.

15. SEA MUGWORT.

Plate 102. Fig. 15. COMMON SEA WORMWOOD.
Artemisia maritima.

Character of the Species.

The Leaves are cottony, and cut into many parts: the spikes of Flowers droop. Fig. 15. *a b.*

THIS is the Plant commonly sold in the place and under the name of Roman Wormwood, though much inferior in virtue. It is a Perennial, native of our sea coasts; a white looking Herb, of a foot high, and of irregular growth; flowering in July. The Stalk is dusky: the Leaves and Shoots are all white, and soft: the Flowers are brown.

16. VARIOUS LEAVED MUGWORT.

Plate 102. Fig. 16.

Artemisia integrifolia.

Character of the Species.

The lower Leaves are pinnatifid: the upper ones are entire, lanced, and woolly underneath. Fig. 16. *a b.*

THIS is a Perennial, native of Siberia; a Plant of four feet high; flowering in June. The Stalk is brown: the Leaves are of a dark green on the upper side, and white underneath: the Flowers are pale, and roundish.

17. GLAUCOUS MUGWORT.

Plate 102. Fig. 17. LAVENDER LEAVED MUGWORT.
Artemisia cæruleſcens.

Character of the Species.

The lower Leaves are simple, and lanc'd; the upper ones are cut into a few divisions. Fig. 17. *a b.*

THIS is a Perennial, native of the sea coasts of the Southern parts of Europe; flowering in August. The Stalks are brown: the Leaves are of a blueish green, and hairy on both sides: the Flowers are pale.

18. HARPED MUGWORT.

Plate 102. Fig. 18.

Character of the Species. Artemisia Maderaspatana.

The Leaves are sinuated in the harped manner: the Flowers grow singly, opposite to the Leaves. Fig. 18. *a b.*

THIS is a Perennial, woody, but mean Plant, native of the Indies; and for the most part lies on the ground: it flowers in August. The Stem is brown: the Shoots are greyish, and hoary: the Leaves are downy, and soft to the touch: the Flowers grow in small rounded Cups, brown, and glossy.

19. DWARFISH MUGWORT.

Plate 102. Fig. 19.

Character of the Species. Artemisia minima.

The Leaves are wedg'd, and nurled: the Flowers stand in the bosoms of the Leaves. Fig. 19. *a b.*

THIS is a Chinese Dwarf; a very singular, annual Plant; flowering in July. The Stalks are weak, brown, and not more than five or six inches long: the Leaves are perfectly smooth, and of a deep green: the Flowers are a pale brown.

GENUS

MUGWORT.
3

Various-leav'd Mugwort.

Sea Mugwort.

Lavender leav'd Mugwort.

Dwarfish Mugwort.

Harp'd Mugwort.

CUD-WEED.

Generic Character.

1

Strong-scented Cudweed?

2

Plantain Cudweed?

4

Everlasting Cudweed.

5

Great flower'd Cudweed?

3

Soft-headed Cudweed?

6

Branchy Cudweed?

GENUS VIII.

CUDWEED.
GNAPHALIUM.

The Cup is rounded; and formed of oval Scales, which bend in at their tops: thoſe at the Baſe are rounded, and membranaceous, and thoſe toward the upper part, are looſer and are filmy. Plate 103. Fig. *o a b c.*

1. STRONG-SCENTED CUDWEED.

Plate 103. Fig. 1.

Character of the Species. Gnaphalium fœtidum.

The Leaves embrace the Stalk, and are ſharp-pointed, undivided, and woolly underneath. Fig. 1. *a b.*

THIS is an Annual, native of Æthiopia; flowering in July. The Stalk is thick, greyiſh, and downy: the Leaves are downy on the under ſide, the Flowers are ſilvery white. The whole Plant has a ſtrong and offenſive ſmell.

2. PLANTAIN CUDWEED.

Plate 103. Fig. 2.

Character of the Species. Gnaphalium plantagineum.

The radical Leaves are oval: the young Shoots creep; the Stalk is ſimple. Fig. 2. *a b.*

THIS is a Perennial, native of Virginia; flowering in Auguſt. The radical Leaves are ſoft to the touch, and of a faint green: the Stalk is three inches high, and at the top grows a looſe tuft of delicate Crimſon Flowers.

3. SOFT HEADED CUDWEED.

Plate 103. Fig. 3. CATSFOOT: or MOUNTAIN CUDWEED.

Character of the Species. Gnaphalium diœcium.

The Stalk is ſimple; the Flowers ſtand in a thick downy cluſter; the young Shoots lean. Fig. 3. *a b.*

THIS is a Perennial, native of our barren hills; it flowers in June. The Stalk is not above three inches high: the Leaves are white underneath; the Flowers form a very elegant downy head, of a cluſtered Form, and pale crimſon colour.

4. EVERLASTING CUDWEED.

Plate 103. Fig. 4. AMERICAN CUDWEED.

Character of the Species. Gnaphalium margaritaceum.

The Flowers grow in a broad ſpreading cluſter: the Leaves are lanced, and ſeſſile. Fig. 4. *a b c.*

THIS is a Perennial, native of North-America: it flowers in July. The Stalk is thick, ſtrong, upright, greyiſh, and two feet high: the Leaves are green on the upper ſide, and hoary underneath: the Flowers are very beautiful: the Florets themſelves are minute and yellow: the Cups are ſilvery, white, and gloſſy.

5. GREAT FLOWER'D CUDWEED.

Plate 103. Fig. 5.

Character of the Species. Gnaphalium grandiflorum.

The Leaves are oval, nervous, downy, and embrace the Stalk. Fig. 5. *a b.*

THIS is a native of Æthiopia; flowering in Auguſt. The whole Plant is white: the Leaves are downy, both on the under and upper ſide: the Flowers are very large, and their Cup is of a ſilvery and ſhining white.

6. BRANCHY CUDWEED.

Plate 103. Fig. 6.

Character of the Species. Gnaphalium helianthemifolium.

The Leaves are lanced, and embrace the Stalk: the Flowers ſtand in a compound cluſter: the Stalk branches greatly. Fig. 6. *a b c.*

THIS is a Perennial woody Plant, native of Æthiopia; flowering in July. The Stem is brown: the Leaves are whitiſh: the Flowers are ſmall and white.

7. THREADY

7. THREADY-LEAFED CUDWEED.

Plate 104. Fig. 7.

Gnaphalium niveum.

Character of the Species.

The Leaves are ſlender as threads, and lie in tily cluſters one over another.

Fig. 7. *a b.*

THIS is a ſmall woody plant, native of Æthiopia; flowering in July. The Stem is greyiſh, and the young Shoots are alſo grey: the Leaves are of a woolly aſpect: the Flowers are of a ſilvery white.

8. PRICKLY CUDWEED.

Plate 104. Fig. 8.

Gnaphalium muricatum.

Character of the Species.

The Leaves are lanced, they turn back, and are armed with thorns at the end.

Fig. 8. *a b.*

THIS is a native of Æthiopia; flowering in Auguſt. A ſmall woody plant: the Stem is brown: the young Shoots are of a pale green: the Leaves are pale, and the points are ſo hard that they are prickly, and they all appear bent, oblique, and contorted: the Flowers are whitiſh.

9. CONIC CUDWEED.

Plate 104. Fig. 9.

Gnaphalium obtuſifolium.

Character of the Species.

The Leaves are lanced and downy underneath; the Stalk is branched; and the Flowers are conic.

Fig. 9. *a b c.*

THIS is an Annual, native of Virginia. An upright plant of two feet high; flowering in June: the Stalk is greyiſh, hairy, and firm: the Leaves are of a delicate green on the upper ſide, and white and woolly underneath: the Flowers are very beautiful, white, with a ſilvery gloſs.

10. PALE HEADED CUDWEED.

Plate 104. Fig. 10.

Gnaphalium indicum.

Character of the Species.

The Leaves are ſhort, lanced, and obtuſe; the Stalk is very branchy; the Cluſters are irregular.

Fig. 10. *a b.*

THIS is an Annual, native of China and the Eaſt Indies; flowering in July. The Stem is weak and whitiſh: the Leaves are of a delicate ſilvery green: and the Flowers are of a ſilver white.

11. SWORD-LEAFED CUDWEED.

Plate 104. Fig. 11.

Gnaphalium luteo album.

Character of the Species.

The Leaves are ſword-ſhaped, and half embrace the Stalk; the Flowers are cluſtered in great heads.

Fig. 11. *a b.*

THIS is an Annual, native of Portugal. A ſingular plant; flowering in Auguſt: the Stalk is upright, ſlender, and greyiſh: the Leaves are oblong, ſword ſhaped, and of a delicate whitiſh green: the Flowers are very bright and gloſſy; ſilvery, but with ſome little tinge of gold.

12. ALATED CUDWEED.

Plate 105. Fig. 12.

Gnaphalium undulatum.

Character of the Species.

The Leaves are lanced, wavy, and run down the Stalk.

Fig. 12. *a b.*

THIS is an Annual, native of America: it flowers in June. The Stalk is upright, firm, and two feet high: the Leaves are green on the upper ſide, but hoary underneath: the Flowers are yellowiſh: but the Cups are white and ſilvery.

13. LEAFY

7

Thready-leav'd Cudweed.

8

Prickly Cudweed.

9

Conic Cudweed.

10

Pale-headed Cudweed.

11

Sword leav'd Cudweed.

12

Alated Cudweed.

Page 139.

13
Leafy Cudweed.

15
Few Flower'd Cudweed.

14
Linear Cudweed.

16
Wedgy Cudweed.

17
Egg-leav'd Cudweed.

18
Golden Cudweed.

13. LEAFY CUDWEED.

Plate 105. Fig. 13. BROAD CITRINE STÆCHAS.

Character of the Species. Gnaphalium arenarium.

The Leaves are large, thin, and numerous; the Stalk is ſimple; and the Flowers have branchy Footſtalks. Fig. 13. *a b.*

THIS is an Annual; native of the dry and ſandy open grounds of ſeveral parts of Europe; flowering in July. The Stalks are ſlender, upright, and pale: the Leaves are of a ſnowy whitiſh hue: the Flowers are of a delicate yellow.

14. LINEAR CUDWEED.

Plate 105. Fig. 14. STÆCHADOVE.

Character of the Species. Gnaphalium ſtœchas dictum.

The Leaves are linear; and the Flowers ſtand in a branched cluſter. Fig. 14. *a b.*

THIS is a Perennial; woody Plant, native of Spain, the South of France, and of ſome parts of Germany; flowering in July. The Stem is brown: the Shoots are of a greyiſh colour: the Leaves are of a pale or ſilvery green: the Flowers are pale yellow.

15. FEW FLOWERED CUDWEED.

Plate 105. Fig. 15.

Character of the Species. Gnaphalium ſordidum.

The Leaves are linear; the Flowers are few, and grow naturally in threes. Fig. 15. *a b.*

THIS is a Perennial; woody Plant, native of the South of France; flowering in July. The Stalk is tender, and greeniſh upwards: the Leaves are of a dull dead green: the Flowers are of a duſky yellow: and their Cups are dull, and greeniſh.

16. WEDGY CUDWEED.

Plate 105. Fig. 16.

Character of the Species. Gnaphalium dentatum.

The Leaves are wedge ſhaped, and cut into three parts at the end. Fig. 16. *a b.*

THIS is a delicate and beautiful Plant, native of Æthiopia; flowering in Auguſt. The Stem is thick: the Branches are tender, and woody; and the young Shoots are whitiſh: the Leaves are pale: the Flowers are of a very beautiful yellow: the Cups alſo are yellow, and gloſſy.

17. EGG LEAVED CUDWEED.

Plate 105. Fig. 17.

Character of the Species. Gnaphalium petiolatum.

The Leaves are egg ſhaped, and have Footſtalks; the Stem is branched, and woody. Fig. 17. *a b.*

THIS is a white woody Plant of Æthiopia; flowering in Auguſt. The Stem is thick, and brown: the young Shoots are of a ſilvery grey: the Leaves are alſo of a ſilvery colour: the Flowers are of a delicate yellow.

18. GOLDEN CUDWEED.

Plate 105. Fig. 18.

Character of the Species. Gnaphalium orientale.

The Leaves are numerous; the Flowers form a great globular head. Fig. 18. *a b.*

THIS is a Perennial; woody Plant, native of Africa; flowering in Auguſt. The Stem is brown: the young Shoots are ſilvery, and white: the largeſt Leaves grow toward the baſe of the Shoots, and are a little folded, and of a ſilvery colour: the Flowers are of a very glorious yellow, Cups and all.

19. CRIMSON CUDWEED.

Plate 106. Fig. 19.

Character of the Species. Gnaphalium rutilans.

The Leaves are lanced, the Stalk branches from the bottom: the Flowers grow in recompound clusters. Fig. 19. *a b.*

This is a Perennial, native of Africa: a foot and a half high; flowering in July. The Stem is firm, whitish, and downy: the Leaves are of a pale green: the Flowers are crimson at first; but become yellow as they open fully.

20. FIERY CUDWEED.

Plate 106. Fig. 20.

Character of the Species. Gnaphalium igneſcens.

The Leaves are linear, and woolly: the Flowers are red, and stand in alternate clusters along the Stalk. Fig. 20. *a b.*

This is a Perennial, native of Africa; flowering in June. The Stalk is tough, and firm: the Leaves are of a downy aspect, and white: the Cups are silvery, and shining: but the Florets themselves are of a fiery red.

21. REFLEX CUDWEED.

Plate 106. Fig. 21.

Character of the Species. Gnaphalium imbricatum.

The Scales of the Cup turn back: the Leaves are lanced, and downy. Fig. 21. *a b.*

This is a Biennial, a native of Africa; flowering in July. The Stem is woody, and brown: the young Shoots are white: the Leaves are woolly, and of a pure silvery white: the Flowers are crimson: the Cup is brown.

22. SWEET-SCENTED CUDWEED.

Plate 106. Fig. 22.

Character of the Species. Gnaphalium odoratiſſimum.

The Leaves run down the Stalk, and are blunt, but have a point from the end. Fig. 22. *a b.*

This is a Perennial, native of the East: it flowers in June. The Stem is whitish, and woolly: the Leaves are white on both sides, and soft: the Flowers are purple.

23. ROSE CUDWEED.

Plate 106. Fig. 23.

Character of the Species. Filago pygmæa.

The Flowers terminate the Stem, and are surrounded by large perfect Leaves. Fig. 23. *a b.*

This is an Annual, native of the southern parts of Europe, and flowers in July. It is not above three inches high: the Stalks are whitish: the Leaves are of a whitish green: and the Flowers pale crimson.

24. OVAL CUDWEED.

Plate 106. Fig. 24.

Character of the Species. Gnaphalium purpureum.

The Flowers are collected in an oval head; and the Leaves are lanced, and naked. Fig. 24. *a b.*

This is a Perennial, native of Virginia. The Stalk is upright, and a foot and a half high: the Leaves are of a dusky whitish colour: the Flowers are red: the Cups are brown.

25. BROAD-HEADED CUDWEED.

Plate 106. Fig. 25.

Character of the Species. Gnaphalium cymoſum.

The Flowers are collected into a broad but compact head: the Leaves are lanced, and embrace the Stalk. Fig. 25. *a b.*

This is a Perennial, native of Africa. The Stalk is silvery, and soft: the Leaves are of a good green on the upper side, and white and woolly underneath: the Flowers are yellowish: the Cups are white.

26. SPATULA'D CUDWEED.

Plate 106. Fig. 26.

Character of the Species. Gnaphalium patulum.

The Leaves are of the spatula shape; the Branches spread. Fig. 26. *a b.*

This is a Perennial, native of Æthiopia; flowering in July. The Stem is firm, and on the upper part silvery white: the Leaves are pale: the Flowers are yellow.

27. OPEN CUDWEED.

Plate 106. Fig. 27.

Character of the Species. Gnaphalium ſcabrum.

The Leaves are ſeſſile, and woolly; oval, and obtuſe. Fig. 27. *a b.*

This is a Perennial, native of Æthiopia; and flowers in June. The whole Plant is woolly; and the Flowers are crimson.

CUDWEED.

4

Crimson Cudweed.

Reflex Cudweed.

Firey Cudweed.

Sweet scented Cudweed.

Rose Cudweed.

Oval Cudweed.

Broad-headed Cudweed.

Spatulated Cudweed.

Open Cudweed.

CUDWEED.

28 Grassy Cudweed.

29 Wood Cudweed.

30 Lions Paw Cudweed.

31 Sea Cudweed.

32 Fork'd Cudweed.

33 Long Footstalk'd Cudweed.

34 Black-headed Cudweed.

35 Elegant Cudweed.

36 Spreading Cudweed.

39 Heathy Cudweed.

37 Leaning Cudweed.

38 Pyramidal Cudweed.

28. GRASSY CUDWEED.

Plate 107. Fig. 28. FRENCH CUDWEED.

Gnaphalium Gallicum.

Character of the Species.

The Flowers ſtand cloſe in the boſoms of the Leaves, and clefts of the Stalks: the Leaves are long and narrow.

Fig. 28. *a b.*

THIS is an Annual, native of our dry grounds; flowering in Auguſt. The Stalk is eight inches high, grey, tough, and ſlender: the Leaves are of a grey green: the Flowers are brown.

29. WOOD CUDWEED.

Plate 107. Fig. 29. ENGLISH CUDWEED.

Gnaphalium ſylvaticum.

Character of the Species.

The Stalk is ſimple and leafy, and the Flowers grow in the boſoms of the Leaves.

Fig. 29. *a b.*

THIS is a Biennial, native of our woods, and flowers in July. The Stalk is a foot high, upright, and without branches: the Leaves are whitiſh: the Flowers are brown.

30. LION'S PAW CUDWEED.

Plate 107. Fig. 30. LION'S PAW.

Gnaphalium leontopodion.

Character of the Species.

The Stalk is ſimple; one great head terminates it, and this is ſurrounded by a verge of leafy Films.

Fig. 30. *a b.*

THIS is a Perennial, native of the Swiſs mountains, and flowers in Auguſt. The Stalk is four inches high: the Leaves are whitiſh: the Flowers are brown.

31. SEA CUDWEED.

Plate 107. Fig. 31.

Character of the Species.

Filago maritima.

The Leaves are woolly, obtuſe, and dented: the cluſter of Flowers is ſimple.

Fig. 31. *a b.*

THIS is a Perennial, native of our ſea-coaſts, and flowers in June. The Stalk is white, and ſeven inches high: the Leaves are white and woolly; and the Flowers are brown.

32. FORKED CUDWEED.

Plate 107. Fig. 32. HERB IMPIOUS.

Gnaphalium Germanicum.

Character of the Species.

The Stalk ſplits in a forked manner: the Flowers ſtand in its diviſions in round cluſters.

Fig. 32. *a b.*

THIS is an Annual, common in our dry grounds, flowering in July, eight inches high. The Leaves are pale, and the Flowers are brown.

33. LONG FOOTSTALKED CUDWEED.

Plate 107. Fig. 33.

Character of the Species.

Gnaphalium ſaxatile.

The Flowers ſtand on long naked Footſtalks: the Leaves are lanced and pointed.

Fig. 33. *a b.*

This is an Annual, native of Italy; and flowers in July. The Stalk is grey: the Leaves are whitiſh: the Flowers are of a pale brown.

34. BLACK-HEADED CUDWEED.

Plate 107. Fig. 34. BLACK CUDWEED.

Gnaphalium uliginoſum.

Character of the Species.

The Stalk is branched: the Leaves are oblong: the Flowers ſtand in ſmall tufts at the tops.

Fig. 34. *a b.*

This is an Annual, common in wet places. The Stalk is weak: the Leaves are whitiſh: the Flowers are black: it flowers in Auguſt.

35. ELEGANT CUDWEED.

Plate 107. Fig. 35. SMALL LION'S PAW.

Gnaphalium Alpinum.

Character of the Species.

The Stalk is ſimple and leafy: the Flowers crown it in a cluſter of pyramidal heads.

Fig. 35. *a b.*

THIS is a Perennial Plant, native of the Swiſs mountains: and flowers in June. The Leaves are green on the upper ſide, and white and downy underneath: the down is ſeen beyond the edge: the Stalk is three inches high: the Flowers are pale.

36. SPREADING CUDWEED.

Plate 107. Fig. 36. CORN CUDWEED.

Character of the Species. Gnaphalium arvenſe.

The Stalk divides into numerous ſpreading Branches; the Flowers ſtick cloſe in the boſoms of the Leaves. Fig. 36. *a b.*

THIS is an Annual, native of our barren grounds, and flowers in Auguſt. The Stalk is four inches high: the Leaves are ſmall and oval: the Flowers are brown: the Stalk and Leaves are woolly.

37. LEANING CUDWEED.

Plate 107. Fig. 37. MOUNTAIN CUDWEED.

Character of the Species. Gnaphalium montanum.

The Stalk leans towards its Baſe: the Flowers are conic, and grow at the tops, and in the boſoms of the Leaves. Fig. 37. *a b.*

THIS is an Annual, common on our dry hilly grounds; flowering in July. The Stalk is weak, branched, and five inches high: the Leaves are narrow, ſmall, and ſharp-pointed; and the Flowers are brown.

38. PYRAMIDAL CUDWEED.

Plate 107. Fig. 38.

Character of the Species. Filago pyramidata.

The Flowers form a pyramidal compact head, and branches riſe above them. Fig. 38. *a b.*

THIS is a very ſmall Plant, native of Spain, not more than two inches high. The Stalk is browniſh: the Leaves are white: and the Flowers pale brown. It flowers in Auguſt.

39. HEATHY CUDWEED.

Plate 107. Fig. 39.

Character of the Species. Gnaphalium teretifolium.

The Leaves are cylindric, and ſtand cluſtered. Fig. 39. *a b.*

THIS is a woody Plant, native of Æthiopia. The Leaves are downy and white: and the Flowers are of a gloſſy grey.

ORDER V.

With the general Cup fringed, or having additional ſcales at the Baſe.

GENUS I.

SENECIO.

The Cup is conic, compoſed of a ſingle row of ſcales, and has a number of ſmall ſhort ſcales fringing the Baſe. Plate 108. *a a b.*

1. LANCED GROUNDSEL.

Plate 108. Fig. 1.

Character of the Species. Senecio divaricatus.

The Leaves are ſimple, lanced, dented, and rough: the Flowers ſtand on divided footſtalks. Fig. 1. *a b.*

THIS is an Annual, native of China, and flowers in June. The Stalk is grey, and eight inches high: the Leaves are pale and woolly: the Flowers are ſmall and yellow.

2. SINUATED GROUNDSEL.

Plate 108. Fig. 2. COMMON GROUNDSEL.

Character of the Species. Senecio vulgaris.

The Leaves are variouſly and irregularly ſinuated, and are all the way nearly of a breadth. Fig. 2. *a b.*

THIS is an Annual, ſix or eight inches high; with weak, though thick Stalks, uſually red: it flowers in July. The Leaves are of a ſtrong green, cut, or eroded: the Flowers are yellow: the body of the Cup is green, and the Fringe is black.

3. LONG-STALK'D GROUNDSEL.

Plate 108. Fig. 3. BASTARD CHINA.

Character of the Species. Senecio Pſeudo-China.

The Flower-ſtalks are very long, and nearly naked. Fig. 3. *a b.*

THIS is a Perennial, native of the Eaſt Indies; flowering in June. The Leaves are of a fine green: the Stalk is two feet high, ſlender, hairy, and in a manner naked: the Flowers are yellow: the Cup is green, and its fringe is brown.

4. AMPLEXICAUL GROUNDSEL.

Plate 108. Fig. 4.

Character of the Species. Senecio hieracii-folius.

The Leaves embrace the Stalk, and ſwell in the middle, and are very deeply cut in irregular ſegments. Fig. 4. *a b.*

THIS is an Annual, native of South-America, flowering all Summer. The Leaves are cut, and of a fine green: the Flowers are numerous, ſmall, and of a faint yellow.

GROUNDSEL.

Generic Character.

Lanc'd Groundsel.

Sinuated Groundsel.

Long-Stalk'd Groundsel.

Amplexicaull Groundsel?

HORSE - FOOT.

Generic Character.

Perforated Horsefoot.

Harp-leav'd Horsefoot.

Trilobate Horsefoot.

Vol. 3 Fragrant Horse - foot.

Blueish-leav'd Horsefoot.

Kidney leav'd Horsefoot.

HORSEFOOT.

CACALIA.

The Cup is formed of a ſingle Series of oblong lanced Scales; which ſometimes unite at their edges. The Fringe is made of a few ſhort filmy ſcales.

Plate 109. *a a b.*

SERIES I.

HERBACEOUS.

1. PERFORATED HORSEFOOT.

Plate 109. Fig. 1.

Character of the Species. — Cacalia porophyllum dicta.

The Leaves are elliptic, crenated, and ſpotted: they are ſeen full of holes when held up to the light. Fig. 1. *a b.*

THIS is an Annual, native of America, and flowers in Auguſt. The Stem is woody and brown: the Leaves are of a freſh green: and as it ſeems ſpotted with a duſky brown: when held to the light they appear perforated: the Flowers are yellow.

2. HARP LEAV'D HORSEFOOT.

Plate 109. Fig. 2.

Character of the Species. — Cacalia Sonchifolia.

The Leaves are ſinuated, and have a great lobe at the end: the Segments are dented. Fig. 2. *a b.*

THIS is an Annual, native of China. The Stalk is firm: the Leaves are of a deep green: the Flowers are ſmall, and of a pale crimſon: they blow in July.

3. TRILOBATE HORSEFOOT.

Plate 109. Fig. 3.

Character of the Species — Cacalia Sonchifolia.

The Leaves are ſpread, three lobed, and indented. Fig. 3. *a b.*

THIS is a Perennial, native of Siberia: a tall Plant; flowering in July. The Stalk is tinged with purple: the Leaves are of a freſh green on the upper ſide, but greyiſh underneath: the Flowers are crimſon.

4. FRAGRANT HORSEFOOT.

Plate 109. Fig. 4.

Character of the Species. — Cacalia ſuaveolens.

The Leaves are arrowed, and their Footſtalks dilate toward the top. Fig. 4. *a b.*

THIS is a Perennial, native of North-America; a Plant of five feet high; flowering in July. The Stalk is of a whitiſh green: the Leaves are of a freſh green colour: the Flowers are ſmall and white.

5. BLUISH LEAV'D HORSEFOOT.

Plate 109. Fig. 5.

Character of the Species. — Cacalia atriplicifolia.

The Leaves are ſomewhat heart-ſhaped, and ſinuated. Fig. 5. *a b.*

THIS is a Perennial, native of North-America; and flowers in Auguſt. The Stalk is of a greyiſh green, and ſmooth: the Leaves are of a bluiſh green, and their ſurface is gloſſy: the Flowers are very ſmall, and whitiſh.

6. KIDNEY-LEAV'D HORSEFOOT.

Plate 109. Fig. 6.

Character of the Species. — Cacalia Alpina.

The Leaves are kidney ſhaped, and ſharply ſerrated. Fig. 6. *a b.*

THIS is a Perennial, native of the mountains of Swiſſerland; and flowers in Auguſt. The Stalk is robuſt, upright, and tinged with crimſon: the Leaves are very delicate, thin, and of a freſh green, but acute and indented: the Flowers ſtand at the tops of the Branches, and are ſmall and of a pale crimſon.

IT is ſingular, that the Florets of the Cacalia are cut only into four Segments inſtead of five: but this holds good in the ſhrubby as well as the herbaceous kinds; and is univerſal in the Genus. We find it occaſionally in ſome Species of the other Genera, but not with this determinate regularity.

SERIES II.
SHRUBBY HORSEFOOTS.

7. OVAL HORSEFOOT.

Plate 110. Fig. 7.

Cacalia antieuphorbium.

Character of the Species.

The Leaves are oval, and three lines run from them down the Stem.

Fig. 7. *a b.*

THIS is a tall ſucculent Plant, native of Æthiopia; flowering in July. The baſe of the Stem is hard and brown: the Shoots are very thick, green, juicy, and tender. We ſee it but imperfectly in this unnatural climate: but in its original ſoil, it is cloſe ſet along all theſe young Shoots, with oval but ſomewhat oblong Leaves, which have three peculiar ribs, that run down from their Baſe. The Flowers are ſmall and white: the Cup is divided deeper than in the other Cacalias, and has but a ſlight Fringe.

8. LANCED HORSEFOOT.

Plate 110. Fig. 8.

Cacalia Kleiniana.

Character of the Species.

The Leaves are lanced, and the branches have faint marks of ſcars from their inſertions.

Fig. 8. *a b.*

THIS is a Perennial, a native of the Canaries, a ſingular and very beautiful Plant: flowering in July. The Stem is thick and woody toward the Baſe, upwards it is tenderer, and of a bluiſh green, but ſpotted with brown ſcars, where Leaves have fallen off. At the crown of the Stem, and from ſeveral thick ſhoots from its ſide, grow ſpreading cluſters of Leaves of a bluiſh green, perfectly flat and ſmooth. The Flowers are ſmall and whitiſh.

9. FLATTED-LEAV'D HORSEFOOT.

Plate 110. Fig. 9.

Cacalia ficoides.

Character of the Species.

The Leaves are lanced and flatted.

Fig. 9. *a b.*

THIS is a native of Æthiopia; flowering in July. The baſe of the Stem is brown and woody: the young Shoots are very fleſhy and green: the Leaves are large, fleſhy, of a pale green, and flat: the Flowers are ſmall and white.

10. WARTED HORSEFOOT.

Plate 110. Fig. 10.

Cacalia papillaris.

Character of the Species.

The Stem is covered with brown warts, which are the remains of fallen Leaves.

Fig. 10. *a b.*

THIS is a large and fleſhy Shrub, native of Æthiopia, and diſtinguiſhed by its rough and moſt ſingular aſpect: it flowers in Auguſt. The Stem is thick, juicy, and of a faint green, but covered with a kind of riſing tubercles: theſe are the remains of the baſes of Leaves which grow hard when the Leaf itſelf is fallen away: they ſtand to a conſiderable height beyond the general ſurface of the Stalk, and are abrupt at the ends: they have perfectly the appearance of harmleſs Spines: the Leaves are of a bluiſh green: the Flowers are ſmall and white.

*** THERE are five other Genera of this Claſs extreamly ſingular, each conſiſting of only one or two Plants: we ſhall therefore give them in one view together. The laſt of them is that by which Nature connects the Herbs of this and the ſucceeding Claſs.

GENUS III.
CHAFEWEED.
MICROPUS.

Character of the Genus.

The Cup has five Scales, of a hooded form: the Fringe has five filmy Leaves.

Plate 111. *a a b.*

1. PROCUMBENT CHAFEWEED.

Plate 111. Fig. 1.

Micropus ſupina.

Character of the Species.

The Leaves are covered with a ſilvery down, and the Seeds are prickly.

Fig. 1. *a b.*

THIS is an Annual, native of Portugal; and flowers in July. The Stalks are ſix inches long: the Leaves are ſilvery: the Flowers, which are inconſiderable, are white. We know no other Species.

HORSEFOOT.

2

Page 144.

7

Oval-leav'd Horsefoot.

8

Lanc'd Horsefoot.

10

Vol. 3 Warted Horsefoot.

1

Flatted leav'd Horsefoot.

COTTONWEED

Generic Character.

CHAFE WEED.

Generic Character

CROWN WORT

Pl. III.

Generic Character

Golden Cottonweed.

Procumbent Chafeweed.

Heathy Crownwort.

SHEEPS RAMPION.

Generic Character

Dentated Cottonweed.

BROADFOOT.

Generic Character.

Hairy Sheeps Rampion.

Rugged Broadfoot.

Woolly Broadfoot.

GENUS IV.
COTTONWEED.
STÆHELINA.

Character of the Genus.

The Cup is tiled; its Scales are lanced, and their points droop. The fringe is filmy.

Plate III. Fig. *o a b.*

1. GOLDEN COTTONWEED.

Plate III. Fig. 2.

Character of the Species. Stæhelina gnaphalodes.

The Leaves are linear, and undivided. Fig. 2. *a b.*

THIS is a Perennial, native of the Cape; and flowers in Auguſt. The Stem is woody: the Leaves are whitiſh: and the Flowers are yellow.

2. DENTATED STÆHELINA.

Plate III. Fig. 3.

Character of the Species. Stæhelina dubia.

The Leaves are linear, and dentated. Fig. 3. *a b.*

THIS is a Biennial, native of Spain; and flowers in July. The Stem is brown: the Leaves are whitiſh: and the Flowers are white.

GENUS V.
CROWNWORT.
STÆBE.

Character of the Genus.

The Cup is round: its Scales are awly, and hard: the Fringe is ſoft: each Floret has a ſeparate five-leaved Cup. Plate III. *o o o a b c.*

1. HEATHY CROWNWORT.

Plate III. Fig. 4.

Character of the Species. Stæbe Æthiopica.

The Leaves ſtand cluſtered, and are narrow, and hooked. Fig. 4. *a b.*

THIS is a woody Perennial Plant, native of Æthiopia; it flowers in Auguſt. The Stem is brown: the Leaves are greyiſh: and the Flowers are pale yellow.

GENUS VI.
SHEEPS RAMPION.
JASIONE.

Character of the Genus.

The Cup is formed of five Scales; its Fringe of five Films, nearly equal to them: each Floret has alſo its ſeparate Cup within, cut into five Segments.

Plate III. *o o o o a b c.*

1. HAIRY SHEEPS RAMPION.

Character of the Species. Jaſione montana.

The Leaves are ſlightly ſerrated. Fig. III. *a b.*

THIS is an Annual, native of our dry hilly paſtures; and flowers in Auguſt. The Stalk is ſlender, and a foot high: the Leaves are greyiſh: and the Flowers are blue.

GENUS VII.
BROADFOOT.
ELEPHANTOPUS.

Character of the Genus.

The Cup is imbricated; and its Scales are prickly: the Fringe conſiſts of four pyramidal Films. There is alſo an involucrum of three great Leaves, containing ſeveral Flowers with their Cups. The Florets run out from a tubular baſe into a narrow flat form, with five indentings.

Plate III. *o o o o o o a b c d.*

1. RUGGED BROADFOOT.

Plate III. Fig. 6.

Character of the Species. Elephantopus Scaber.

The Leaves are oblong, lanced, and rugged. Fig. 6. *a b.*

THIS is a Perennial, native of the Indies; and flowers in Auguſt. The Stalk is rough, pale, and a foot high: the Leaves are rugged, and duſky: the Flowers are crimſon.

2. WOOLLY BROADFOOT.

Plate III. Fig. 7.

Character of the Species. Elephantopus tomentoſus.

The Leaves are oval, and downy. Fig. 7. *a.*

THIS is a Perennial, native of Virginia; and flowers in Auguſt. The Stalk is downy, and a foot and a half high: the Leaves are whitiſh; and the Flowers are crimſon.

HERBS

With ASSEMBLED FLORETS, and UNITED CHIVES.

CLASS III.

With ASSEMBLED LIGULATED FLORETS.

Of the Orders, or Subdivisions of the THIRD CLASS.

THESE Plants have some differences in their Cups; which are constant to the Genera whereto they belong; and therefore become the marks of distinct Orders: but the number is less by one than in the tubulated, radiate, and naked Classes: for the Ligulated Class does not afford any one Plant whose Cup is entire.

SUCH a Cup as the Othonna shews among the radiated kinds, the Tarchonanthus offers among the naked: a vase of one piece nip'd at the rim: but among these there is no such Cup.

THE four other distinctions are found in this Class; but the Plants are distributed very differently under them. Both in the radiated and naked kinds, the order of fringed Cups contains only one Genus: here it is the most comprehensive of the whole. The same order which in those two Classes holds only the radiated or naked Species of Groundsel; in this of the ligulated kinds has no less than seven Genera: and, as the first natural order of the other assembled flowers is wanting altogether here, the two succeeding are but very thinly supplied: the second has only one Genus, the Andryala; and the third only one, the Tragopogon. In this Class, therefore, Nature has been more uniform than in those. The Til'd Cup is the only kind beside the Fringed, which is of any consequence.

THE Plants with assembled ligulated Florets, are therefore to be comprised under four Orders.

ORDER I.

THOSE which have the Cup simple, or of one row of Scales.

ORDER II.

DOUBLE, or with two rows of Scales.

ORDER III.

TILED, or with many rows of Scales like Tiles.

ORDER IV.

FRINGED, or with a border of a different kind at the bottom.

WOOLL THISTLE.

Generic Character.

Entire-leav'd Woolly Thistle.

Cut-leav'd Wool Thistle.

HERBS.

SERIES I.

With UNITED CHIVES.

CLASS III.

With ASSEMBLED LIGULATED FLORETS.

ORDER I.

With the GENERAL CUP ſimple.

GENUS I.

WOOL THISTLE.

ANDRYALA.

Character of the Genus.

The Cup is rounded, ſhort, and hairy: its Scales are numerous, equal, and ſharp pointed. Plate 112. *a a b.*

1. ENTIRE LEAV'D WOOL-THISTLE.

Plate 112. Fig. 1.

Character of the Species. Andryala integrifolia.

The Leaves are undivided. Fig. 1. *a.*

THIS is an Annual, native of the ſouthern parts of Europe; and flowers in July, and Auguſt: it is a foot and a half high, and ſingular enough to have kept a place long in gardens in any degree curious. The Stalk is white: the Leaves are alſo whitiſh, and woolly: the Flowers are of a good bright, and ſtrong yellow: they grow on the tops of all the Branches.

2. CUT-LEAV'D WOOL-THISTLE.

Plate 112. Fig. 2.

Character of the Species. Andryala ſinuata.

The Leaves are deeply ſinuated, and ſpear-ſhaped at the end. Fig. 2. *a b.*

THIS is a Perennial, native of the Cape of Good Hope; and flowers in July. It ſhews, tho' the Cape Plants are in a great degree peculiar, they are not all ſo; for it is found alſo in Italy. It is a foot high; a white Plant, with golden Flowers: the Leaves are covered with a white Wool; and the Stalk is alſo white. It bears our open air freely, but the ſoil muſt be dry, or it fails in winter.

ORDER II.

With the general Cup DOUBLE; or compoſed of two rows of Scales.

GENUS I.

GOATSBEARD.

TRAGOPOGON.

Character of the Genus.
The Cup is compoſed of long, leafy, pointed Scales, in two diſtinct rows.
Plate 113. *a a b.*

1. SIMPLE-LEAV'D GOATSBEARD.

Plate 113. Fig. 1. YELLOW GOATSBEARD.
Tragopogon pratenſe.

Character of the Species.
The Leaves are ſimple, graſſy, and undivided: the Cup is longer than the Flower.
Fig. 1. *a a*

THIS is a Biennial, native of our paſtures; and flowers in July: it is two feet high. The Leaves and Stalk are of a fine graſſy green, or ſomewhat paler: the Flowers are yellow; they always cloſe at noon. LINNÆUS makes the Cup of this Plant equal with the Flower: but it is conſiderably longer.

2. WAVY GOATSBEARD.

Plate 113. Fig. 2.
Tragopogon Orientale.

Character of the Species.
The Leaves are undivided, but waved at the edge: the Cup is ſhorter than the Flower.
Fig. 2. *a b.*

THIS is a Biennial, native of the Eaſt; and flowers in June: it is two feet and a half high. The Leaves are delicately waved, and of a deep green: the Flowers are extreamly large, and of a fine yellow.

3. THICK-CROWN'D GOATSBEARD.

Plate 113. Fig. 3. SALSAFIE.
Tragopogon porrifolium.

Character of the Species.
The Stalk grows thick, juſt under the Flower; and the Cup is longer than the Rays.
Fig. 3. *a b.*

THIS is a Biennial, native of the ſouthern parts of Europe; and flowers in Auguſt: it has long had a place in gardens, as an eſculent Plant, and is what was heretofore called Artiſie, now Salſafie: it is near a yard high. The Leaves are of a ſtrong green; and the Flowers are purple. The young Stalks of this, and of the wild, or firſt kind, are eaten as Aſparagus: There is a great deal of this now wild in the North of England: but probably it is from Seeds ſcattered out of gardens.

4. HAIRY GOATSBEARD.

Plate 113. Fig. 4.
Tragopogon Hybridum.

Character of the Species.
The Leaves are graſſy, and hairy: the Cup is longer than the Flower.
Fig. 4. *a b.*

THIS is an Annual, native of Italy; and flowers in July: a low but very handſome Plant. The Stalk riſes to about fourteen inches height, and is of a faint green: the Flowers are of a delicate pale crimſon.

5. HARPED

GOATSBEARD.

Generic Character.

1 *Simple-leav'd Goatsbeard.*

2 *Wavy Goatsbeard.*

3 *Thick Crown'd Goatsbeard.*

4 *Hairy Goatsbeard.*

GOATSBEARD.

2

Harp'd Goatsbeard.

Woolly Goatsbeard.

Prickly Goatsbeard.

Harsh Goatsbeard.

5. HARPED GOATSBEARD.

Plate 114. Fig. 5.

Character of the Species. Tragopogon Virginicum.

The radical Leaves are harped, or pinnatifid with a great end: thoſe on the Stalk are undivided. Fig. 5. *a b.*

THIS is a Biennial, native of North-America, and flowers in September. The radical Leaves are numerous, of a deep green, and ſmooth: the Stalk is a foot and a half high, and has about two Leaves; theſe are lanced, undivided, and embrace it, and are of a deader green: the Cups are ſhorter than the Flowers; and theſe are of a pale yellow. The Cup contradicts LINNÆUS's character: he allows Tragopogon but eight Leaves, or Scales; and yet himſelf owns this has twelve.

3. WOOLLY GOATSBEARD.

Plate 114. Fig. 6.

Character of the Species. Tragopogon dalechampii.

The Leaves are woolly, and deeply ſinuated, and have a large end: the Cup is ſhorter than the Flower. Fig. 6. *a b.*

THIS is a Perennial; native of Spain, and flowers in July. It is a ſingular and not inelegant Plant: the Stalk riſes to a foot and a half: the Leaves are white and woolly: and the Flowers are of a very delicate yellow.

7. PRICKLY GOATSBEARD.

Plate 114. Fig. 7.

Character of the Species. Tragopogon picroides.

The Cups are prickly, and ſhorter than the Flower: the Leaves are ſinuated. Fig. 7. *a b.*

THIS is a Biennial, native of the Greek iſlands, and flowers in Auguſt. A Plant of the Sow-thiſtle aſpect; but with the Goatſbeard Cup: it is two feet and a half high: the Stalk is pale: the Leaves are of a fine green, and the Flowers are yellow: it bears the free air perfectly with us: and grows elſewhere ſo well from the ſcattered Seeds, that in the South of France it appears as native.

8. HARSH GOATSBEARD.

Plate 114. Fig. 8.

Character of the Species. Tragopogon aſperum.

The Cups are covered with ſhort harſh briſtles, and are ſhorter than the Flower. Fig. 8. *a.*

THIS is a Biennial, native of the South of France, and flowers in Auguſt. It is two feet and a half high: the Stalk is pale: the Leaves are of a fine freſh green: and the Flowers are yellow. The Cups have a yellowiſh brown aſpect, which is owing to the Hairs on them, and is ſingular: the Plant has more the habit of the Sow-thiſtles than Goatſbeard: but by the Cup is inconteſtably of the Goatſbeard kind.

THE wild Goatſbeard of Germany has by ſome been thought different from that of England: but though a larger Plant, it is the ſame. The Cups in the German kind are uſually ſomewhat ſhorter than in the Engliſh, but not conſtantly ſo.

ORDER

ORDER III.

GENUS I.

d With the general Cup TILED; or compoſed of ſeveral ranges of Scales.

SOW-THISTLE.

SONCHUS.

Character of the Genus.
The Cup ſwells at its Baſe: the Scales are numerous, pyramidal, and unequal. Plate 115. *o a b.*

IT is not always, that in the courſe of an artificial method we can purſue the ſteps of Nature; yet in this inſtance it is happily effected: the two laſt Goatſbeards have ſo much of the Sow-thiſtle habit, that they lead eaſily and naturally into this Genus.

1. YELLOW HAIR'D SOWTHISTLE.

Plate 115. Fig. 1. TREE SOWTHISTLE. Sonchus arvenſis.

Character of the Species.
The Cups and Footſtalks of the Flowers are covered with long thick yellow hairs: the Leaves are hearted at the Baſe. Fig. 1. *a b.*

THIS is a Perennial; native of our clayey corn-fields; and flowers from June to November. A ſtately and far from an inelegant Plant: the Leaves are of a fine bright, tho' ſomewhat yellowiſh green: the Stalk is a yard high, and of the colour of the Leaves: the Flowers are large and yellow.

2. PRICKLY SOWTHISTLE.

Plate 115. Fig. 2. JAGGED PRICKLY SOWTHISTLE. Sonchus olreaceus aſper.

Character of the Species.
The Cups and Footſtalks of the Flowers are ſmooth: the Leaves are edged with brown weak thorns. Fig. 2. *a b.*

THIS is an Annual, native of our corn-fields and garden grounds; and flowers from July to November, in a repeated ſucceſſion: the ſeeds ſcattered in July, raiſe Plants that flower in Auguſt; and this continues till the froſts kill them. It is two feet high; and the Stalks and Leaves are of a good freſh green: the Flowers are yellow. LINNÆUS thinks this only a variety of the ſmooth Sow-thiſtle: And RAY, on the other hand, makes many Species out of this one, as the Leaves are more or leſs jagged. Extreams are generally wrong. This Plant will not be raiſed from the ſeeds of the ſmooth kind; but all its variations in jagging, will riſe from its own ſeed. I have tried it at Bayſwater this ſummer.

IF the Stalk of the jagged kind be cut down, branches, with undivided, but prickly Leaves will riſe from the part left; but this is all: the ſmooth will not become prickly, nor this ſmooth by any management.

3. ROUGH FOOT STALK'D SOWTHISTLE.

Plate 115. Fig. 3.

Character of the Species. Sonchus Canadenſis.
The Footſtalks of the Flowers are long and rough: the Leaves are deeply ſinuated. Fig. 3. *a b.*

THIS is an Annual, native of Canada; and flowers in Auguſt. The Leaves are of a freſh green on the upper ſide, and grey below: the Flowers are blue.

4. SCALY FOOT STALK'D SOWTHISTLE.

Plate 115. Fig. 4.

Character of the Species. Sonchus Floridanus.
The Leaves are harped: the Footſtalks of the Flowers are covered with little Scales. Fig. 4. *a b.*

THIS is an Annual, native of Virginia; and flowers in Auguſt. It is five feet high: the Leaves are pale green: and the Flowers are blue.

5. BRANCHY

SOW THISTLE.

Generic Character.

Yellow-hair'd Sow Thistle.

Prickly Sow Thistle.

Rough Footstalk'd Sow Thistle.

Scaly Footstalk'd Sow Thistle.

SOWTHISTLE.

2

c Branchy Sowthistle.

Clustery Sowthistle.

Vol. 3 Giant Sowthistle. Lanc'd Sowthistle. Delicate Sowthistle.

5. BRANCHY SOWTHISTLE.

Plate 116. Fig. 5. SMOOTH SOWTHISTLE.

Sonchus oleraceus lævis.

Character of the Species.

The Stalk is branched; the Leaves are deep sinuated; and the Footstalks of the Flowers are downy. Fig. 5. *a b.*

THIS is an Annual; or if we may be allowed a new term, a MENSAL Plant; for it will grow from Seed to flowering in about thirty days; and has in a summer many generations. Had one of the autumnal Plants a voice, it might say with truth, My grandfather's great grandfather was born this last spring; and my father has manured the ground wherein I grow: so quick is the shoot, and so short the duration of this kind of Plants. It is a yard high: the Leaves are of a blueish green; and the Flowers are yellow.

6. CLUSTERY SOWTHISTLE.

Plate 116. Fig. 6.

Sonchus Alpinus.

Character of the Species.

The Leaves are winged, and have a great spear'd lobe at the end; the Flowers grow in clusters upon downy Footstalks. Fig. 6. *a b.*

THIS is an Annual, native of the Swiss and German hills; and flowers in August. A stately, singular, and very noble Plant. The Stalk is whitish, downy, and five feet high: the Leaves are whitish: and the Flowers are blue.

7. GIANT SOWTHISTLE.

Plate 116. Fig. 7. MARSH TREE SOWTHISTLE.

Sonchus paluſtris.

Character of the Species.

The Flowers grow in an umbrella'd form, and have downy Footstalks: the Leaves are sinuated.

THIS is a Perennial, native of our marshes; and flowers in July: it is seven feet high. The Stalk is pale green: the Leaves are of a good green on the upper side, but pale and whitish underneath: the Flowers are yellow.

8. LANCED SOWTHISTLE.

Plate 116. Fig. 8.

Sonchus Sibiricus.

Character of the Species.

The Leaves are lanced, undivided, and have no Footstalks. Fig. 8. *a b.*

THIS is a Perennial, native of Norway, and of Siberia; and flowers in August. The Stalk is red: the Leaves are of a fine green: the Flowers are of a very delicate blue.

9. DELICATE SOWTHISTLE.

Plate 116. Fig. 9.

Sonchus tenerrimus.

Character of the Species.

The Leaves are divided into fine delicate Segments; and the Cups are hairy. Fig. 9. *a b.*

THIS is an Annual, native of the warmer parts of Europe; and is a very pretty Plant: it flowers in June. The Stalk is pale: the Leaves are of a faint green: the Cups are covered with white hairs: and the Flowers are yellow.

GENUS II.

WAYWEED.

CATANANCHE.

Character of the Genus.
The Cup is formed of numerous loose Scales, with permanent hollow membranaceous heads. Plate 117. *a a b.*

1. BLUE WAYWEED.

Plate 117. Fig. 1.

Catananche cærulea.

Character of the Species.
The lower Scales in the Cup are oval; the Florets form but a single range. Fig. 1. *a b.*

This is an Annual, native of the warmer parts of Europe; and flowers in July: it is two feet and a half high. The Stalk is pale: the Leaves are of a faint green: and the Flowers are of a delicate structure, and fine blue: it is so frequent by road sides in Italy, that it has a name expressing the Way-side-weed.

2. NERVOUS WAYWEED.

Plate 117. Fig. 2.

Catananche lutea.

Character of the Species.
The Leaves are oblong, and dented, and have large strong ribs: the lower Scales in the Cup are lanced. Fig. 2. *a b.*

This is an Annual, native of the East; and flowers in June. The Stalk is pale: the Leaves are of a strong and fine green on the upper side, but paler underneath: the Flowers are of a very beautiful yellow.

3. LACINATED WAYWEED.

Plate 117. Fig. 3.

Catananche Græca.

Character of the Species.
The Leaves are cut into many irregular Segments. Fig. 3. *a.*

This also is an Annual, native of the Greek Islands; and flowers among the damp rocks about the shore in June and July. The Stalk is whitish: the Leaves are of a greyish green: the Flowers are delicately yellow.

WAYWEED.

Generic Character.

2

Nervous Waywed.

1

Blue Waywed.

3

Laciniated Waywed.

GOSMORE.

Generic Character.

2

Stinging Gosmore.

1

Long Rooted Gosmore.

3

Daisy-leav'd Gosmore.

4

Lanc'd-leav'd Gosmore.

5

Spotted Gosmore.

6

Glafsy Gosmore.

GENUS III.

GOSMORE.

HYPOCHÆRIS.

Character of the Genus.

The Cup is ſwoln, and rounded at the Baſe: the Scales of it are lanced and ſharp pointed. Plate 118. *o a b.*

1. LONG-ROOTED GOSMORE.

Plate 118. Fig. 1. LONG-ROOTED HAWKWEED.

Character of the Species. Hypochæris radicata.

The Stalk is branched and naked, but for a few Films: the Leaves are ſinuated. Fig. 1. *a b.*

THIS is a Perennial, native of our Paſtures, and common as almoſt any Plant which grows in them: it flowers in June. The Leaves riſe only from the root: they are of a coarſe yellowiſh green: the Stalk is yellowiſh: the Flowers are gold yellow: the Seeds float in the air with a feathery down; and this is what our old Engliſh writers diſtinctly called Goſmore. The term has been ſince applied to the down of any Seed.

2. STINGING GOSMORE.

Plate 118. Fig. 2.

Character of the Species. Hypochæris urens.

The Stalk is leafy and branched: the Leaves are dented, and the Cups are hairy. Fig. 2. *a b c.*

THIS is a Biennial, native of Sicily; and flowers in Auguſt. The Leaves are of a duſky green: the Stalk is paler: the Flowers are yellow: their Cups ſting like nettles.

3. DAISY-LEAV'D GOSMORE.

Plate 118. Fig. 3.

Character of the Species. Hypochæris achyrophorus.

The Leaves are obtuſe and dented: the Cup is covered with long hairs. Fig. 3. *a b.*

THIS is an Annual, native of the Greek iſlands; and flowers in July. The Leaves are of a bluiſh green, and ſlightly hairy: the Stalk is pale: the Flowers are very large and yellow: and their Cups are remarkably hairy.

4. LANCED LEAVED GOSMORE.

Plate 118. Fig. 4.

Character of the Species. Hypochæris montana.

The Leaves are lanced and dented: the Stalk is leafy, but ſupports only one Flower. Fig. 4. *a b.*

THIS is a Biennial, native of the mountains of Savoy; and flowers in Auguſt. The Stalk is two feet high, tho' it ſupports only a ſingle Flower: the Leaves are of a bright freſh green: the Flower is yellow.

5. SPOTTED GOSMORE.

Plate 118. Fig. 5.

Character of the Species. Hypochæris maculata.

The Stalk is naked, but for ſome ſlight films, and has a ſingle branch: the Leaves are oblong oval. Fig. 5. *a b.*

THIS is a Biennial, native of our heathy grounds; and flowers in July. The Leaves are of a faint green, hairy, and often ſpotted with black: the Stalk is greyiſh: and the Flower is of a delicate pale yellow.

6. GLOSSY GOSMORE.

Plate 118. Fig. 6.

Character of the Species. Hypochæris glabra.

The Leaves are ſmooth and ſinuated: the Stalk is leafleſs. Fig. 6. *a b.*

THIS is an Annual, native of Holland; and flowers in Auguſt. The Leaves are of a freſh green: the Stalk is browniſh, and the Flowers are yellow.

GENUS IV.

LETTUCE.

LACTUCA.

Character of the Genus.

The Cup is oblong and cylindric: its ſcales are numerous, and have ſharp points. Plate 119. *a a b.*

1. SCENTED LETTUCE.

Plate 119. Fig. 1. GREAT WILD LETTUCE.

Character of the Species. Lactuca viroſa.

The Leaves are prickly on the back of the middle rib, and are variouſly divided. Fig. 1. *a b c.*

THIS is a Biennial, native of our clay banks; and flowers in Auguſt. It is five feet high: the firſt, or radical Leaves, are undivided: thoſe on the Stalks are more or leſs jagged: the Flowers are ſmall, and of a pale yellow. They did ill who affixed poiſonous to this Plant: I have found it a ſafe, tho' powerful Narcotic.

2. SHORT-LEAV'D LETTUCE.

Plate 119. Fig. 2. GARDEN LETTUCE.

Character of the Species. Lactuca ſativa.

The Leaves are thornleſs, ſhort, and obtuſe: the Flowers grow in ſpreading cluſters. Fig. 2. *a b.*

THIS is an Annual, raiſed in our gardens with infinite variety; but its origin is from Italy, where there are wild Plants now, very like what we call the common, Cabbage Lettuce: from theſe have ariſen the better Cabbage Lettuces; and from thoſe the Sileſia, Cos, and all the other varieties, by ſaving Seed from Plants of a peculiar aſpect. This, in its wild ſtate, is two feet high: the Stalk is ſlender: the Leaves are of a yellowiſh green: and the Flowers are pale yellow.

3. OAK LETTUCE.

Plate 118. Fig. 3.

Character of the Species. Lactuca quercina.

The Leaves are thornleſs, and deeply ſinuated in the winged manner. Fig. 3. *a.*

THIS is a Perennial, native of the northern parts of Europe; and flowers in July and Auguſt. The Stalk is pale: the Leaves are of a faint green: and the Flowers are yellow.

4. SWORD-LEAV'D LETTUCE.

Plate 118. Fig. 4.

Character of the Species. Lactuca Canadenſis.

The Leaves are ſword-ſhaped, and ſerrated at the edges, but deſtitute of thorns. Fig. 4. *a b.*

THIS is an Annual, native, as it is thought, of Canada: but I ſuſpect it only degenerated from ſcattered ſeed of the Cos Lettuce. It is four feet high: the Leaves are of a freſh green: the Flowers are yellow.

5. WHITE RIBB'D LETTUCE.

Plate 118. Fig. 5.

Character of the Species. Lactuca ſaligna.

The Leaves have the great rib white, and are thorny at the Back; and they are ſpread at the Baſe. Fig. 5. *a.*

THIS is a Biennial, native of the warmer parts of Europe; and flowers in Auguſt. The Stalk is five feet high, and brown: the Leaves are deep green: the Flowers are yellow.

6. PERENNIAL LETTUCE.

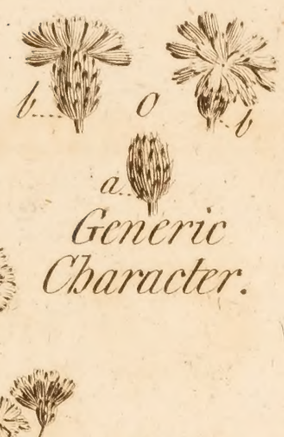
Plate 118. Fig. 6.

Character of the Species. Lactuca perennis.

The Leaves are linear, deeply ſinuated in the winged manner, and the jaggs are cut again. Fig. 6. *a b.*

THIS is a Perennial, native of France and Germany; and flowers in Auguſt. The Stalk is uſually reddiſh: the Leaves are deep green: and the Flowers are yellow.

LETTUCE.



Generic Character.

Scented Lettuce?

Short-leav'd Lettuce.

Oak Lettuce

Sword leav'd Lettuce

White-rib'd Lettuce?

Perennial Lettuce?

HAWK-WEED.

Vol. 3 1
Blo-ted Hawkweed.

2
Harsh-cup'd Hawkweed.

3
Bushy Hawkweed.

4
Umbrella'd Hawkweed

Generic Character.

GENUS V.

HAWKWEED.

HIERACIUM.

Character of the Genus.

The Cup is cylindric, but rounded at the Baſe: its Scales are very numerous, and unequal, but all linear, and pointed; and they are laid longitudinally one over another.

Plate 120. *o a b.*

It has been a cuſtom to divide this numerous Genus according to their naked or leafy Stalks: but the diſtinction between Leaf and Film upon the Hawkweed Stalk is too indeterminate: Culture alſo will ſometimes give an extraordinary branch; and a poor ſoil will withhold the uſual Films. We muſt therefore depend on the ſpecific diſtinctions which are founded on more ſtable parts, and will not vary.

1. BLOTTED HAWKWEED.

Plate 120. Fig. 1. Golden Lungwort.

Character of the Species. Hieracium murorum.

The Leaves are oval, woolly, and ſpotted: the Cups are almoſt ſmooth.

Fig. 1. *a b.*

This is a Biennial, native of our own country, and common on old walls. The Leaves are ſpotted with irregular marks of black, and covered very thick with long white hairs: the Stalk is two feet high: the Flowers are yellow.

The Leaves of this Plant vary greatly: they are broader or narrower, and more or leſs indented, according to the ſituation; but the eſſential characters continue always the ſame.

2. HARSH-CUP'D HAWKWEED.

Plate 120. Fig. 2.

Character of the Species. Hieracium paludoſum.

The Cups are covered with long, harſh hairs: the Leaves are ſmooth.

Fig. 2. *a b.*

This is a Biennial, native of the marſhy grounds at the bottoms of hills in Switzerland and Germany; and flowers in July. The Leaves are of a fine, freſh green, perfectly ſmooth, and free from ſpots: the Flowers are yellow: and the hairs upon their Cups are black.

3. BUSHY HAWKWEED.

Plate 120. Fig. 3. Broad-leav'd bushy Hawkweed.

Character of the Species. Hieracium ſabaudum.

The Leaves are oval-lanced, indented, and embrace the Stalk: the Flowers are numerous.

Fig. 3. *a b.*

This is a Perennial, native of the hilly woods and thickets throughout England; and flowers in July: it is three feet high. The Leaves are of a dull green; and the Flowers are of a very fine and glowing yellow.

4. UMBRELLA'D HAWKWEED.

Plate 120. Fig. 4. Narrow-leav'd bushy Hawkweed.

Character of the Species. Hieracium umbellatum.

The Leaves are linear, lanced, and dented: the Flowers grow in a kind of umbrella.

Fig. 4. *a b.*

This alſo is a Perennial, native of our thickets: it flowers in Auguſt. The Stalk is two feet and a half high: the Leaves are of a bright green: and the Flowers of a fine ſtrong yellow.

5. HARPED HAWKWEED.

Plate 121. Fig. 5.

Hieracium lyratum.

Character of the Species.

The Leaves are harped, and ſmooth: the Cups and Footſtalks of the Flowers are hairy. Fig. 5. *a b c.*

THIS is a Biennial, native of Siberia; and flowers in Auguſt: it is a foot and a half high. The Stalk is red at the bottom, green upwards, and at the top whitiſh and hairy: the Leaves are of a fine freſh green: the Flowers are yellow.

6. CLAMMY HAWKWEED.

Plate 121. Fig. 6.

Hieracium glutinoſum.

Character of the Species.

The Leaves are ſinuated, and almoſt harped, and rough: the Flowers form a broad cluſter. Fig. 6. *a b c.*

THIS is a Biennial, native of France, and Germany; and flowers in June. The Stalk is of a pale faint green: the Leaves are rough, and rugged, and are often tinged with brown; they are always moiſt and clammy to the touch: the Flowers are ſmall, but of a very delicate yellow.

7. WOOLLY FOOTSTALK'D HAWKWEED.

Plate 121. Fig. 7.

Hieracium Kalmii.

Character of the Species.

The Leaves are lanced, and dented: the Footſtalks of the Flowers are white, and woolly. Fig. 7. *a b.*

THIS is a Biennial, native of North-America; and flowers in Auguſt: it is two feet and a half high. The Leaves are of a pale green; and the Stalk is uſually reddiſh: the Flowers are of a pale but delicate yellow.

8. HARSH HAWKWEED.

Plate 121. Fig. 8.

Hieracium ſprengerianum.

Character of the Species.

The Leaves half embrace the Stalk, and are nurl'd along the edge, and covered with harſh hairs: the Stalk divides into many Branches. Fig. 8. *a b.*

THIS is a Biennial, native of Spain, and Portugal; and by far the moſt auguſt of all the Hawkweeds. The Stalk is reddiſh: the Leaves are of a fine ſtrong green: the Flowers are of a gold yellow, and blow in Auguſt.

9. FEW-FLOWER'D HAWKWEED.

Plate 121. Fig. 9.

Hieracium Blattaroides.

Character of the Species.

The Flowers ſtand ſingly in looſe Cups: the Leaves embrace the Stalk, and are lanced, and dented. Fig. 9. *a b.*

THIS is a Biennial, native of the Pyrenæan mountains; and flowers in June. The Stalk is brown: the Leaves are of a deep green, but rendered ſomewhat paler by a few ſcattered hairs: the Flowers are large, and yellow.

HAWKWEED.

6

Clammy Hawkweed.

5

Harpd Hawkweed.

7

Woolly Footstalkd Hawkweed.

8

Marsh Hawkweed

9

Few-flowerd Hawkweed.

HAWKWEED

3

Amplexicaul Hawkweed.

Wavy Hawkweed.

Grassy Hawkweed.

Clustery Hawkweed.

Barb'd Hawkweed.

10. AMPEXICAUL HAWKWEED.

Plate 122. Fig. 10.

Character of the Species. Hieracium amplexicaule.

The Leaves are hearted, lightly dented, and embrace the Stalk: the Flowers ſtand ſingly on their Footſtalks. Fig. 10. *a b.*

THIS is a Biennial, native of the Pyrenees; and flowers in July. The Stalk is green, and tender: the Leaves are of a duſky and ſomewhat browniſh green: and the Flowers are of a delicate yellow.

11. WAVY HAWKWEED.

Plate 122. Fig. 11.

Character of the Species. Hieracium cerinthoides.

The radical Leaves are oval and dented: thoſe on the Stalk are oblong and waved. Fig. 11. *a b.*

THIS is a Perennial, native alſo of the Pyrenees; and flowers in Auguſt. The Stalk is thick, and naturally reddiſh: the Leaves are of a bluiſh green: the Flowers are of a deep, but not unpleaſing yellow.

12. GRASSY HAWKWEED.

Plate 122. Fig. 12.

Character of the Species. Hieracium porrifolium.

The Leaves are narrow and graſſy: the Stalk is extreamly branched. Fig. 12. *a b.*

THIS is a Biennial, native of Italy; a very ſingular and pretty Plant; and flowers in Auguſt. The Leaves are perfectly graſſy in form and colour: the Stalk rarely exceeds ten inches in height: the Flowers are delicately yellow.

13. CLUSTERY HAWKWEED.

Plate 122. Fig. 13.

Character of the Species. Hieracium paniculatum.

The Leaves are lanced, dentated, and ſmooth: the Flower-ſtalks are thready. Fig. 13. *a b.*

THIS is an Annual, native of Canada. A tender Plant of ten or twelve inches in heighth: the Stalk is brown and hairy: the Leaves are of a fine green, and ſmooth: the Flowers are of a very duſky yellow.

14. BARBED HAWKWEED.

Plate 122. Fig. 14.

Character of the Species. Hieracium Pyrenaicum.

The Leaves are barbed, or notch'd backward: the Stalk is ſimple. Fig. 14. *a b.*

THIS is an elegant little Plant, native of the Pyrenean mountains; and flowers in July. The Leaves are of a deep, ſtrong, and yet lively green: the Stalk is tender, and alſo green: the Flowers are delicately yellow.

15. SPIKED

15. SPIKED HAWKWEED.

Plate 123. Fig. 15.

Hieracium præmorſum.

Character of the Species.

The Leaves are woolly, oval, and dented: the Flowers are placed in a ſpike upon a branched leafleſs Stalk. Fig. 15. *a b.*

THIS is a Perennial, native of Switzerland and Hungary; and flowers in July. The Stalk is pale: the Leaves are woolly and whitiſh: the Flowers are yellow.

16. OVAL-LEAV'D HAWKWEED.

Plate 123. Fig. 16.

Hieracium dubium.

Character of the Species.

The Leaves are ſmooth, and oval, but ſomewhat oblong: there are runners from the root, and the Stalk is naked, but ſupports ſeveral Flowers. Fig. 16. *a b.*

THIS is a Perennial, native of Sweden; and flowers in July. The Leaves are of a faint green, and ſcarce at all hairy: the Stalks are alſo pale: the Flowers are of the ſame delicate yellow with our common Mouſe-Ear.

17. LANCED-LEAV'D HAWKWEED.

Plate 123. Fig. 17.

Hieracium auricula dictum.

Character of the Species.

The Leaves are lanced: there are runners from the root, and the Stalk has many Flowers. Fig. 17. *a b c.*

THIS is a Perennial, native of France and Germany; and flowers in June. The Leaves are of a duſky green: the Stalk is fourteen inches high: the Flowers are yellow.

18. ORANGE HAWKWEED.

Plate 123. Fig. 18. GRIM THE COLLIER.

Hieracium aurantiacum.

Character of the Species.

The Leaves are oval and hairy: the Flowers ſtand in a great cluſter on a naked Stalk. Fig. 18. *a b.*

THIS is a Biennial, native of the Eaſt; but has been long an inhabitant of our gardens. The Leaves are duſky, and are covered with long hairs: the Stalk is pale: and the Flowers are of an extreamly ſtrong orange colour, tending to ſcarlet. It flowers all ſummer.

19. VARIOUS LEAVED HAWKWEED.

Plate 123. Fig. 19.

Hieracium Chondrilloides.

Character of the Species.

The radical Leaves are lanced and undivided: thoſe on the Stalk are deep cut backwards. Fig. 19. *a b.*

THIS is a Biennial, native of the North of Europe; a Plant of five inches high. The Leaves are of a faint green: the Stalk is paler: and the Flowers are pale yellow.

20. VIOLET HAWKWEED.

Plate 123. Fig. 20.

Hieracium Gronovii.

Character of the Species.

The Leaves are egg-ſhaped, undivided, a little hairy, and violet coloured underneath: the Flowers are cluſtered. Fig. 20. *a b.*

THIS is a Perennial, native of Penſilvania: a Plant of ten inches high; flowering in Auguſt. The Leaves are of a deep green: and the Flowers of a ſtrong yellow.

21. SMALL-CLUSTERED HAWKWEED.

Plate 123. Fig. 21.

Hieracium Gmelini.

Character of the Species.

The Leaves are oval, ſerrated, and ſmooth: the Flowers ſtand in little cluſters. Fig. 21. *a b.*

THIS is a Perennial, native of Siberia; and flowers in Auguſt. The Leaves are of yellowiſh green: the Stalks are alſo green: and the Flowers pale yellow.

22. CREEP-

HAWKWEED.

4

16

Oval leav'd Hawkweed.

17

Lanc'd leav'd Hawkweed

15

Spiked Hawkweed.

19

Various leav'd Hawkweed.

20

Violet Hawkweed.

18

Orange Hawkweed.

21

Small cluster'd Hawkweed.

HAWKWEED.

22

b

a

Creeping Hawkweed.

23

a

Rugged Hawkweed.

24

b

a

Rough hair'd Hawkweed.

25

a

Woolly Cup'd Hawkweed.

26

a

b

Painted Hawkweed.

22. CREEPING HAWKWEED.

Plate 124. Fig. 22. MOUSE-EAR.

Character of the Species. Hieracium pilosella dictum.

The Leaves are oval, and undivided; there are runners from the Root, and only one Flower on the Stalk. Fig. 22. *a b.*

THIS is a Perennial, common on our banks and walls, and in dry hilly pastures, and flowers from May to Michaelmas. The Leaves are of a dark green, and white underneath, and covered with white hairs: the Flowers are large, and of a pale yellow.

23. RUGGED HAWKWEED.

Plate 124. Fig. 23.

Character of the Species. Hieracium incanum.

The Leaves are lanced, rugged, and just dented: there are no runners, and the Stalk has only one Flower. Fig. 23. *a b.*

THIS is a Biennial, native of the hills in Germany and Switzerland; and flowers in August. The Leaves are of a pale green, with a tinge of brown, and they are a little hairy: the Stalk is greyish; and the Flower is of a strong yellow.

24. ROUGH HAIR'D HAWKWEED.

Plate 124. Fig. 24.

Character of the Species. Hieracium Hedypnoides.

The Leaves are deep cut, clammy, and covered with harsh hairs: the Stalk supports but one Flower. Fig. 24. *a b.*

THIS is a Perennial, native of France and Germany; and flowers in August. The Leaves are of a faint and yellowish green, but they are rendered greyish by some long white hairs: the Stalk is paler; and the Flower is of a very fine gold yellow.

25. WOOLLY CUPPED HAWKWEED.

Plate 124. Fig. 25. MOUNTAIN MOUSE-EAR.

Character of the Species. Hieracium Alpinum.

The Leaves are oblong, waved, and hairy: the Cup is woolly. Fig. 25. *a b.*

THIS is a Perennial, native of the Welch mountains; and flowers in August. The Leaves are of a deep green, but covered with long hairs, which give them a whitish aspect: the Stalk is five inches high, and pale: the Cup is covered with soft hairs, like wool, the Flower is pale yellow.

THIS Plant affords abundant proof of the uncertainty there is in the method of dividing the Hawkweeds, according to the characters of the Stalks. Naturally the Stalk of this is naked, or has a single thread. RAY has observed, in gardens, it has many such; here, at Bayswater, they are become broad, and filmy, and there is a bud for a second Flower.

26. PAINTED HAWKWEED.

Plate 124. Fig. 26.

Character of the Species. Hieracium venosum.

The Leaves are wedg'd, and beautifully veined: the Stalk is thick, and naked. Fig. 26. *a b.*

THIS is a Perennial, native of Virginia; a singular and beautiful Plant: it flowers in September. The Leaves are hairy, and have large red veins and spots: the Stalk is greyish; and the Flower pale yellow.

GENUS VI.

GOLD THISTLE.

SCOLYMUS.

Character of the Genus.
The Cup is oval; and its Scales are prickly. Plate 125. Fig. *a a b.*

1. ANNUAL GOLD THISTLE.

Plate 125. Fig. 1.

Scolymus maculatus.

Character of the Species.
The edges of the Leaves are thin, and delicate, but armed with long white thorns. Fig. 1. *a a b.*

THIS is an Annual, native of France, and Italy; and flowers from July to October; a noble, ſpecious, and moſt ſingular Plant: it is five feet high, and vaſtly branched. The Leaves are of a delicate bright green; and the Flowers are gold yellow. Its thorny Leaves cauſed it to be called a Thiſtle, but moſt improperly.

2. PERENNIAL GOLD THISTLE.

Plate 125. Fig. 2.

Scolymus Hiſpanicus.

Character of the Species.
The edges of the Leaves are thick; and the Spines are browniſh. Fig. 2. *a b.*

THIS is a native of Italy, Spain, and France; a very handſome Plant. The Stalk is pale, and branched: the Leaves are deep green; and the Flowers gold yellow.

GENUS VII.

SUCCORY.

CICHOREUM.

Character of the Genus.
The Cup is cylindric, and the outer range of its Scales is looſe and leafy. Fig. *a a b.*

1. SINUATED SUCCORY.

Plate 125. Fig. 3.

WILD SUCCORY.
Cichoreum intybus dictum.

Character of the Species.
The Leaves are deeply ſinuated; and the Stalk is ſimple. Fig. 3. *a b.*

THIS is a Perennial, common by our road ſides in dry places; and flowers in Auguſt: it is two feet high. The Leaves are of a deep duſky green; and the Flowers are blue.

2. WAVY SUCCORY.

Plate 125. Fig. 4.

ENDIVE.
Cichoreum endivia dictum.

Character of the Species.
The Leaves are waved, and crenated; and the Stalk is ſimple. Fig. 4. *a b.*

THIS is an Annual, native of Spain; but now abundant in our gardens, and abundantly altered in the form and cutting of its Leaves. The Stalk is two feet and a half high: the Leaves are pale green; and the Flowers are blue.

3. THORNY SUCCORY.

Plate 125. Fig. 5.

Cichoreum ſpinoſum.

Character of the Species.
The Stalk ſplits always in a forked manner; and the Leaves are prickly.

THIS is a Biennial, native of Sicily; and flowers upon the ſandy ſea-ſide hills in Auguſt: it is two feet high. The Leaves are of a blueiſh green: the Stalks are whitiſh; and the Flowers are of a delicate blue.

GOLD THISTLE.

Annual Gold Thistle.

Perennial Gold Thistle.

Generic Character.

SUCCORY.

Generic Character.

Sinuated Succory.

Wavy Succory.

Thorny Succory.

DAN- DE- LION.

Curl'd Dandelion.

Abrupt Dandelion.

Sword-leav'd Dandelion.

Harsh Dandelion.

Oval-leav'd Dandelion.

Downy Dandelion.

GENUS VIII.
DANDELION.
LEONTODON.

Character of the Genus.
The Cup is bell-ſhaped: the three lower ranges of Scales are looſe, ſhorter by degrees, and leafy. Plate 126. *o a b.*

1. CURLED DANDELION.

Plate 126. Fig. 1. COMMON DANDELION.

Character of the Species. Leontodon taraxacum dictum.
The Leaves are ſinuated backward: the lower Scales of the Cup curl downwards. Fig. 1. *a b.*

THIS is a Perennial, univerſal in our paſtures and gardens; and flowers throughout the year. The Leaves are of a freſh green: the Flowers are yellow.

2. ABRUPT DANDELION.

Plate 126. Fig. 2. YELLOW DEVIL'S BIT.

Character of the Species. Leontodon Autumnale.
The Leaves are ſmooth and dented: the Scales are upright: the Stalk is filmy. Fig. 2. *a b c.*

THIS is a Perennial, frequent every where in our paſtures; and flowers in Auguſt. The Leaves are of a freſh bright green: the Stalk is ſomewhat yellowiſh: the Flowers are yellow.

3. SWORD-LEAV'D DANDELION.

Plate 126. Fig. 3.

Character of the Species. Leontodon Dandelion.
The Leaves are long, narrow, ſword-ſhaped, and undivided. Fig. 3. *a b.*

THIS is a Biennial, native of Virginia; and flowers in September. The Leaves are of a ſtrong deep green: the Stalk is pale, and toward the top is ſomewhat hairy and clammy: the Flowers are yellow.

4. HARSH DANDELION.

Plate 126. Fig. 4. ROUGH DANDELION.

Character of the Species. Leontodon hiſpidum.
The Leaves are dented, and covered with harſh hairs; and the Cup is hairy. Fig. 4. *a b.*

THIS is a Perennial, frequent in our paſtures; and flowers in July. The Leaves are of a yellowiſh green: the Stalk is a foot high, and of the ſame colour: the Flower is of a tawney yellow. The Leaves in this Plant vary greatly in the degree of indenting and hairineſs; but the Species is the ſame.

5. OVAL LEAV'D DANDELION.

Plate 126. Fig. 5.

Character of the Species. Leontodon bulboſum.
The Leaves are oval, but ſomewhat oblong and ſmooth: the Cups are ſmooth: but the Footſtalks of the Flowers are hairy. Fig. 5. *a b c.*

THIS is a Perennial, native of Italy; and flowers in July. The Root is thick and rounded: the Leaves are of a pale green: and the Flowers are yellow.

6. DOWNY DANDELION.

Plate 126. Fig. 6.

Character of the Species. Leontodon tuberoſum.
The Leaves are dented, and covered with a fine down: the Cup is ſlender. Fig. 6. *a b.*

THIS is a Perennial, native of the ſouth of France; and flowers in Auguſt. The Root is thick and tuberous: the Leaves are of a whitiſh green, and have a downy aſpect: the Flowers are pale yellow.

GENUS IX.

VIPERS GRASS.

SCORZONERA.

Character of the Genus.

The Cup is conic: the inner Scales are long: the two outer ranges are much ſhorter; and they have all a thin, pale, membranaceous Edge.

Plate 127. *a a b.*

1. BROAD-LEAV'D VIPERS GRASS.

Plate 127. Fig. 1.

Character of the Species. Scorzonera humilis.

The radical Leaves are broad, and have great ribs: the Stalk ſupports only one Flower.

Fig. 1. *a b.*

THIS is a Perennial, native of the paſtures of France and Germany; aad flowers in Auguſt. The radical Leaves are of a very ſtrong deep green: the Stalk is paler, and has a few films: the Flower is large, and of a fine yellow.

2. AMPLEXICAUL VIPERS GRASS.

Plate 127. Fig. 2.

Character of the Species. Scorzonera Hiſpanica.

The Stalk is branched, and has many Flowers: the Leaves embrace it, and are waved.

Fig. 2. *a b.*

THIS is a Perennial, native of Spain, and alſo of Siberia: it flowers in July. The Leaves are of a dull green, and waved at their edges: the Stalk is two feet high, and of the colour of the Leaves: the Flowers are of a fine yellow. This is the Species we ſhould cultivate in gardens for its eſculent root.

3. GRASSY-LEAV'D VIPERS GRASS.

Plate 127. Fig. 3. SCORZONERA.

Character of the Species. Scorzonera graminifolia.

The Leaves are narrow, flat, and graſſy: the Stalk thickens under the Flower.

Fig. 3. *a b.*

THIS is a Perennial, native of Spain, and ſome other parts of Europe; and flowers in July: a low but handſome Plant. The Leaves are of a fine freſh green: the Stalk is about ten inches high: it divides near the ground, and is there downy, and thickens toward the Flower: the Cup is browniſh: and the Flower is yellow.

4. PURPLE VIPERS GRASS.

Plate 127. Fig. 4.

Character of the Species. Scorzonera purpurea.

The Stalk is branched: the Leaves are graſſy, flat, and waved: the Foot-ſtalks of the Flowers do not ſwell.

Fig. 4. *a b.*

THIS is a Perennial, native of Germany; and flowers in Auguſt. It is two feet high: the Stalk is pale: the Leaves are of a pleaſing pale green: the Flowers are of a very delicate blue purple.

5. SWORD-

Generic Character.

Broad-leav'd Vipers-Grass.

Amplexicaul Vipers-Grass.

Grassy-leav'd Vipers-Grass.

Purple Vipers Grass.

VIPERS-GRASS.

2

Sword-leav'd Vipers-grass.

Sinuated Vipers-grass.

Deep Sinuated Vipers Grass.

Decumbent Vipers-grass.

Various-leav'd Vipers-grass.

5. SWORD-LEAV'D VIPERS GRASS.

Plate 128. Fig. 5.

Character of the Species. Scorzonera anguſtifolia.

The Leaves are long, narrow, undivided, keel'd, and ſharp pointed. Fig. 5. *a b.*

THIS is a Biennial, native of Portugal, and alſo of Siberia: it flowers in Auguſt. The Leaves are of a coarſe but ſtrong green: the Stalk is pale; and the Flowers are of a very beautiful light yellow.

6. SINUATED VIPERS GRASS.

Plate 128. Fig. 6.

Character of the Species. Scorzonera laciniata.

The Leaves are long, and deeply ſinuated; and they are all the way of a breadth. Fig. 6. *a.*

THIS is a Biennial, native of France and Germany; and flowers in Auguſt. The Leaves are of a delicate, tho' not ſtrong green: the Stalk is pale: the Flowers are of a gold yellow; and their Cups are gloſſy.

7. DECUMBENT VIPERS GRASS.

Plate 128. Fig. 7.

Character of the Species. Scorzonera reſedifolia.

The Stalk lies on the ground; the Leaves are obtuſely ſinuated; the Cups are downy at their top. Fig. 7. *a b c.*

THIS is a Biennial, native of Spain and Portugal; a ſmall and humble Plant, and flowers in July. The Leaves are of a very delicate green: the Stalks are reddiſh; and the Flowers are of a ſtrong fine yellow.

8. DEEP SINUATED VIPERS GRASS.

Plate 128. Fig. 8.

Character of the Species. Scorzonera tingitana.

The Leaves embrace the Stalk, and are deeply ſinuated forward: the Jags turning outwards. Fig. 8. *a b.*

THIS is an Annual, native of Africa, and of the ſouthern parts of Europe; and flowers in Auguſt: a very beautiful Plant. The Leaves are of a faint, and ſomewhat bluiſh green, extreamly elegant in their form and diviſion: the Stalk is very pale; and the Flowers are yellow.

9. VARIOUS LEAV'D VIPERS GRASS.

Plate 128. Fig. 9.

Character of the Species. Scorzonera picroides.

The radical Leaves are harped; thoſe on the Stalk amplexicaul, and undivided. Fig. 9. *a b.*

THIS is an Annual, native of Spain; and flowers in July. The Leaves are of a fine, tho' not ſtrong green: the Stalks are tender, and uſually ſtained with red: the Flowers are yellow.

ORDER IV.

With the general Cup fringed; or ſurrounded at the Baſe with additional and peculiar Scales.

GENUS I.

MAITHEN.

CREPIS.

Character of the Genus.
The body of the Cup is cylindric, and form'd of a ſingle range of oblong, narrow, pointed, ſwelling Scales, cloſe ſet: its Fringe is formed of three ranges of ſhort pyramidal Films. Plate 129. *a a b.*

1. LACINIATED MAITHEN.

Plate 129. Fig. 1. SUCCORY HAWKWEED.

Crepis biennis.
Character of the Species.
The Leaves are variouſly laciniated in a winged, and ſomewhat ſpeary form; the body of the Cup is round, with ſoft prickles: the Fringe is ſmooth. Fig. 1. *a b.*

THIS is a Biennial, common in our paſtures, and is the Herb our farmers properly call Maithes and Maithen; a name they in ſome places confuſedly give to the Stinking May-weed, and in others to the Adonis. It is a foot and a half high, and flowers in June. The Leaves are of a yellowiſh green: the Flowers are inconſiderable, but numerous, and of a pale yellow.

2. BROAD-LEAV'D MAITHEN.

Plate 129. Fig. 2.

Crepis Alpina
Character of the Species.
The Leaves are oblong, pointed, and indented, and embrace the Stalk by a broad Baſe. Fig. 2. *a b.*

THIS is a native of the Alps and Pyrenees, an Annual of a foot and half high; a ſingular and very beautiful Plant. The Leaves are of a freſh and fine green, but with ſome tint of bluiſh: the Stalk is pale: the Flower is large, and yellow: the body of its Cup is green, and armed with ſhort, weak, black ſpines: the Fringe is of a faded brown.

THIS Plant grows like the Sowthiſtle, ſo quick from Seeds to flowering, that here at Bayſwater, between the ſecond of June, and this twenty-eighth of October, I have raiſed three generations.

3. NAKED STALK'D MAITHEN.

Plate 129. Fig. 3.

Crepis nudicaulis.
Character of the Species.
The Leaves are harſh, lanced, and ſinuated: the Stalk ſupports but one Flower. Fig. 3. *a b.*

THIS is a Biennial, native of France and Spain; a Plant of a foot high, flowering in June. The Leaves are of a yellowiſh green, and are crown'd with duſky, ſharp-pointed, hard hairs: the Stalk is yellowiſh; and the Flower is of a fine yellow.

4. CRIM-

o

a

b

Generic Character.

b

a

1

Laciniated Maithen.

3

Naked Stalk'd Maithen.

b

a

2

Broad-leav'd Maithen.

MAITHEN 2

6
Bearded Maithen

5
Pinatifid Maithen

8
Yellow Fringed
Maithen

4
Crimson Maithen

Petty Maithen

4. CRIMSON MAITHEN.

Plate 130. Fig. 4.

Character of the Species. Crepis rubra.

The radical Leaves are deeply and closely sinuated: the upper ones are lanced, dented, and amplexicaul. Fig. 4. *a b.*

This is an Annual, an Alpine Plant, singular in the colour of its Flower, and the most beautiful of all this kind: it is a foot high, and flowers in June. The Leaves are of a fine, fresh, but not deep green: the Stalk is pale; and the Flower is of the most elegant pale crimson.

5. PINNATIFID MAITHEN.

Plate 130. Fig. 5.

Character of the Species. Crepis bursifolia.

The Leaves are pinnatifid: the Stalk is naked, and has only one Flower. Fig. 5. *a b.*

This is a Perennial, native of Italy and Sicily; flowering in June: a very pretty little Plant. The Leaves are of a pale green: the Stalk is tender, and reddish; and the Flower is of a very delicate pale yellow.

6. BEARDED MAITHEN.

Plate 130. Fig. 6. Bearded Hawkweed.

Character of the Species. Crepis barbata.

The Fringe is longer than the body of the Cup, and makes a kind of beard. Fig. 6. *a.*

This is a native of the southern parts of Europe; but has long been a favourite in our gardens, where culture adds often to the singularity of its bearded Cup, by rendering it proliferous, a young Offspring surrounding the Parent Flower. See Plate 12, where this is figured among the Luxuriances in Vegetables.

The Plant is two feet high: its Leaves are of a dark green; and its Flowers of a bright yellow.

7. PETTY MAITHEN.

Plate 130. Fig. 7.

Character of the Species. Crepis pygmæa.

The Stalk leans: the Leaves are oval, hairy, undivided, and have Footstalks. Fig. 7. *a b.*

This is a Biennial, native of Italy; a petty Plant, but not without its beauty: the Stalk is weak, and red: the Leaves are of a deep green; and the Flowers are of a remarkable light yellow.

8. HOLLOW FRING'D MAITHEN.

Plate 130. Fig. 8.

Character of the Species. Crepis vesicaria.

The Fringe of the Cup swells into a kind of oval bladder. Fig. 8. *a.*

This is a Biennial, native of Italy and Switzerland; a singular and not unhandsome Plant. The Root is thick, and fleshy: the Leaves are harped, and rough: the Stalk spreads wildly; and the Flowers are yellow.

9. ARROWED MAITHEN.

Plate 131. Fig. 9.

Crepis pulchra.

Character of the Species.
The Leaves are arrowed and indented: the Footſtalks of the Flowers are ſwelled and turbinate. Fig. 5. *a b.*

This is an Annual, native of France; and flowers in July. The Stalk is a foot and a half high, and is red toward the ground: the Leaves are of a very fine ſtrong green: the Flowers are ſmall, but they are of a beautiful yellow.

10. ALATED MAITHEN.

Plate 131. Fig. 10.

Crepis Sibirica.

Character of the Species.
The Leaves are oval and dented, and they have alated dented leafy Footſtalks. Fig. 10. *a b.*

THIS is a Biennial, native of Siberia; a very ſingular Plant; flowering in Auguſt. The Stalk is yellowiſh: the Leaves are of a good green, but with ſome tinge alſo of yellow: the Flowers are of a very bright gold colour.

11. GUMMY MAITHEN.

Plate 131. Fig. 11.

Crepis tectorum.

Character of the Species.
The Cups are covered with gummy hairs: the radical Leaves are ſinuated: the others lanced and dented. Fig. 11. *a b c.*

THIS is an Annual, native of the warmer parts of Europe, and common there on old walls, and the tops of houſes; flowering in July. The radical Leaves are uſually red: the Stalk is alſo of a reddiſh brown: the Leaves on it are of a duſky green, ſomewhat paler on the under ſide: and the Flowers are yellow.

12. HARSH STALK'D MAITHEN.

Plate 131. Fig. 12.

Crepis hirta.

Character of the Species.
The Leaves are harped, and ſpeary at the end: the Stalk is harſh to the touch. Fig. 12. *a b.*

THIS is an Annual, native of France and Germany; and flowers in June. The radical Leaves are of a coarſe green: the Stalk is two feet and a half high, very harſh and yellowiſh: the Flower is large and yellow.

13. STRONG-SCENTED MAITHEN.

Plate 131. Fig. 13.

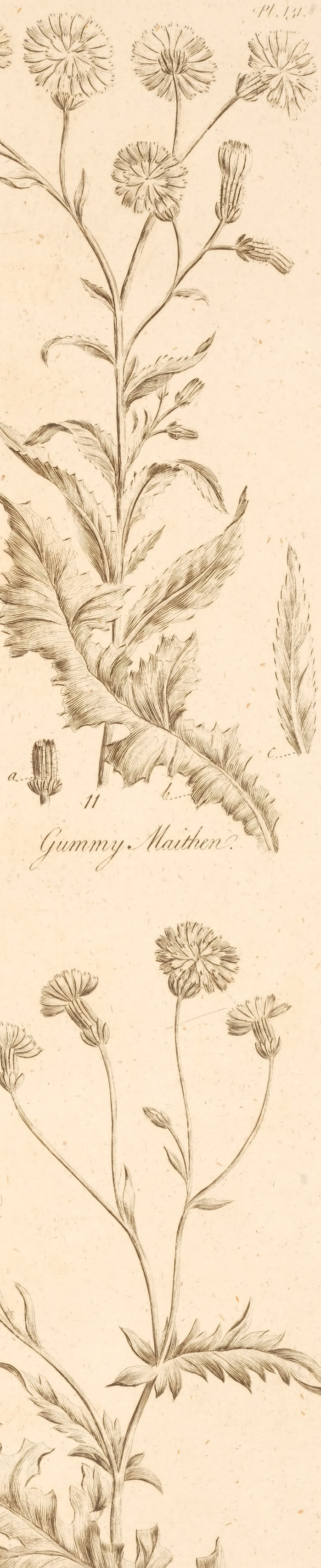
Crepis fœtida.

Character of the Species.
The Leaves are winged, and their Footſtalks are leafy and indented. Fig. 13. *a b.*

THIS is a Biennial, native of France; and flowers on their dry waſte grounds in Auguſt. The Stalk is of a pale green: the Leaves are of a fine ſtrong green: and the Flowers are of a deep yellow.

9
Arrow'd Maithen.

10
Alated Maithen?



11
Gummy Maithen?

12
Vol.3 Harsh-stalk'd Maithen.

13
Strong scented Maithen.

OX-TONGUE.

Generic Character.

Wide fring'd Ox-tongue.

Broad flower'd Ox-tongue.

Dwarf Ox-tongue.

Pinnatifid Ox-tongue.

GENUS II.

OX-TONGUE.

PICRIS.

Character of the Genus.

The body of the Cup is oval, and thick ſet with Scales: its Fringe is compoſed of five large, hearted, leafy Films. Plate 132. *o a b.*

1. WIDE-FRING'D OX-TONGUE.

Plate 132. Fig. 1. LANG DE BEUF.

Character of the Species. Picris Echoides.

The Flowers are kept cloſe by the neck of the Cup: the fringe of the Cup is harſh to the touch. Fig. 3. *a.*

THIS is a Biennial, native of our dry banks and hilly commons, flowering from June to November: the Leaves are of a freſh but not ſtrong green, and they are covered with a kind of white bliſters. The Stalks are often brown; and the Flowers are of a fine yellow. The roughneſs of its Leaves occaſioned our old Writers to call it Wild Bugloſs: ſo little did they attend to the real characters of Plants. We now generally know it by the French Sallad name, Lang de Beuf, Ox-tongue, from the oblong ſhape, and extream roughneſs of the Leaves.

2. BROAD-FLOWER'D OX-TONGUE.

Plate 132. Fig. 2. YELLOW SUCCORY.

Character of the Species. Picris Hierachoides.

The fringe of the Cup is filmy, harſh, and oblong: the Flowers ſpread wide open. Fig. 2. *a b.*

THIS is a Perennial, native of our country, and frequent on the edges of plow'd grounds; flowering in Auguſt. The Leaves are of a yellowiſh green: the Stalk is paler, and both are covered with ſtiff hairs: the Flowers are large, and of a ſtrong yellow, and they ſpread wide open.

3. DWARF OX-TONGUE.

Plate 132. Fig. 3.

Character of the Species. Picris pygmæa.

The fringe of the Cup is looſe and leafy; and the Leaves are ſinuated. Fig. 3. *a b.*

THIS is a very ſmall and very ſingular Plant, a native of the Pyrenæan mountains: it flowers in Auguſt. The Leaves are of a dark blackiſh green, and ſlightly covered with long hairs: the Stalks are paler, and more hairy: and the Flowers are of a pale and delicate yellow.

4. PINNATIFID OX-TONGUE.

Plate 132. Fig. 4.

Character of the Species. Picris Aſplenoides.

The Leaves are pinnatifid, and their lobes are rounded and alternate. Fig. 4. *a b.*

THIS is a Biennial, native of Ægypt; and flowers in June. The Leaves are of a dull and duſky green: the Stalk is browniſh: and the Flowers are yellow.

GENUS III.

SWINES SUCCORY.

HYOSERIS.

Character of the Genus.

The Cup is compoſed of ten, lanc'd, equal, upright, leafy Scales: its Fringe is form'd of very ſhort Films. Plate 133. *a a b.*

1. DWARF SWINES SUCCORY.

Plate 133. Fig. 1. Hyoſeris minima.

Character of the Species.

The Stalk is deſtitute of Leaves, but divided into Branches. Fig. 1. *a b.*

THIS is a petty Plant, native of our dry and barren grounds; and flowers in Auguſt. The Leaves are of a faint green: the Stalks are pale: and the Flowers are of a very pale and lemon yellow.

2. STRONG-SCENTED SWINES SUCCORY.

Plate 133. Fig. 2. Hyoſeris fœtida.

Character of the Species.

The Leaves are pinnatifid: the Stalk is ſimple, leafleſs, and ſupports only one Flower. Fig. 2. *a b.*

THIS is a Biennial, native of Italy and Germany; and flowers in July. The Leaves are of a freſh green: the Stalk is red toward the ground, and green upwards, and is undivided, and a foot high: the Flower is large and yellow.

3. SPREAD-LEAV'D SWINES SUCCORY.

Plate 133. Fig. 3. Hyoſeris radiata.

Character of the Species.

The Leaves are pinnatifid: and the extream lobe ſpreads out its diviſions like Rays. Fig. 3. *a b.*

THIS is a Perennial, native of Spain, and of the ſouth of France, and flowers in July and Auguſt. The Leaves are of a fine bright green, but often crimſon toward the Baſe: the Stalk is naked, and a foot high: the Flower is yellow.

4. RUGGED SWINES SUCCORY.

Plate 133. Fig. 4. Hyoſeris ſcabra.

Character of the Species.

The Leaves are pinnatifid, and have a rugged ſurface: the Stalk is naked. Fig. 4. *a b.*

THIS is a Biennial, native of Sicily; a rough, ill-looking Plant, and flowers in Auguſt. The Leaves are of a browniſh green: the Stalk is alſo browniſh: and the Flower is of a pale yellow.

5. VARIOUS LEAV'D SWINES SUCCORY.

Plate 133. Fig. 5. Hyoſeris Virginica.

Character of the Species.

The firſt Leaves are oval; thoſe which riſe afterwards are lanc'd, and the laſt are harp'd: all riſe in ſucceſſion only from the Root; for the Stalk is naked. Fig. 5. *a b.*

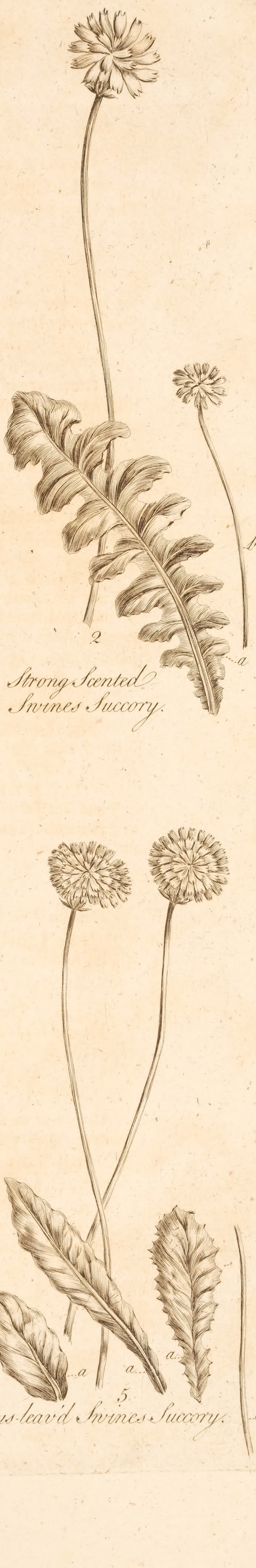
THIS is a Biennial, native of Virginia; a ſmall, odd looking Plant, and flowers in Auguſt. The Leaves are of a deep green: the Stalk is pale: the Flowers are of a faint yellow.

6. SMOOTH

Generic Character.

Dwarf Swines Succory.

Spread leav'd Swines Succory.



Strong Scented Swines Succory.

Rugged Swines Succory.

Various-leav'd Swines Succory.

SWINES SUCCORY.

2

6

Smooth headed Swines Succory.

a.

b.

c.

7

Rough-headed Swines Succory.

a.

b.

8

Oval-headed Swines Succory.

a.

b.

6. SMOOTH-HEADED SWINES SUCCORY.

Plate 134. Fig. 6.

Character of the Species. Hyoſeris hedypnois.

The heads of Seeds are roundiſh, and ſmooth: the Footſtalk of the Flower ſwells; and the Flower droops. Fig. 6. *a b.*

THIS is an Annual, native of France, and Italy; and flowers in July. The Stalk is of a good green: the Leaves are deep green, and ſhining: the Flowers are of a pale, but very bright and pleaſing yellow.

7. ROUGH-HEADED SWINES SUCCORY.

Plate 134. Fig. 7.

Character of the Species. Hyoſeris Rhagadioloides.

The heads of Seeds are globular, and hairy: the Stalk is branched, and leafy. Fig. 7. *a b.*

THIS is an Annual, native of France, and Portugal; and flowers from the beginning of June to October. The Leaves are of a duſky green: the Stalks have a tinge of brown; and the Flowers are yellow. The Cups have uſually a brown tinct above the Fringe, which is handſome.

8. OVAL-HEADED SWINES SUCCORY.

Plate 134. Fig. 8.

Character of the Species. Hyoſeris Cretica.

The heads of Seeds are oblong, oval, and covered with briſtles. Fig. 8. *a b.*

THIS is a Biennial, native of Crete; a very ſingular and not inelegant Plant. The Stalks are pale: the Leaves are of a faint but not unpleaſing green: the Flowers are yellow.

IN this Genus the character of naked and leafy Stalks is more determinate than in the Hawkweeds; but even here it cannot be received as the mark of a diſtinct arrangement: for, in the Dwarf kind here at Bayſwater, there are a few Films upon ſome of the Stalks; though that is of the number of thoſe in which they are naturally naked.

GENUS

GENUS IV.
NIPPLEWORT.
LAPSANA.

Character of the Genus.

The Cup is oval, and ridged, and is formed of eight hollowed, linear, equal, ſharp pointed Scales: the Fringe conſiſts of ſix very ſmall pointed Scales, placed alternate with the others.

Plate 135. *a b.*

1. BRANCHY NIPPLEWORT.

Plate 135. Fig. 1.

NIPPLEWORT. Lapſana communis.

Character of the Species.

The Footſtalks of the Flowers are very much branched: the ridges of the Cup are high.

Fig. 1. *a b.*

THIS is a Biennial, native of our dry banks and waſte grounds; and flowers in Auguſt. The Leaves are of a duſky and very unpleaſant green: the Stalk is a yard high, and toward the top is extreamly branched: the Flowers are ſmall, and yellow.

2. WARTY NIPPLEWORT.

Plate 135. Fig. 2.

Character of the Species. Lapſana zacyntha dicta.

The Cup is ſhort, depreſs'd, ridg'd, and warty: the Footſtalks thicken under the Flowers.

Fig. 2. *a b.*

THIS is an Annual, native of Italy; and for the ſingularity of its aſpect, has long held a place in our gardens: it is two feet high. The Leaves are of a freſh and very fine green: the Stalk is uſually reddiſh; and the Flowers are ſmall, and yellow: the ridges of the Cup, when the Seeds are ripening, are covered with red warty knots.

3. STARRY NIPPLEWORT.

Plate 135. Fig. 3.

STARRY HAWKWEED. Lapſana ſtellata.

Character of the Species.

The Leaves are lanced, and undivided: the Cup ſpreads out in Rays.

Fig. 3. *a b.*

THIS is an Annual, native of France, and Italy; and flowers in July. The Stalk is weak: the Leaves are of a deep but unpleaſing green: the Flowers are of a pale yellow; and the ſtarry rays about the Seeds are brown.

4. HARPED NIPPLEWORT.

Plate 135. Fig. 4.

WART SUCCORY. Lapſana rhagadiolus dicta.

Character of the Species.

The Leaves are harped, or pinnatifid, with a broad end: the Cup under the Seeds ſpreads, and is ſtarry.

Fig. 4. *a b.*

THIS is a Biennial, native of the Eaſt: a very ſingular Plant, flowering in July. The Stalks are reddiſh: the Leaves are deep green; and the Flowers are yellow.

5. RUGGED NIPPLEWORT.

Plate 135. Fig. 5.

Character of the Species. Lapſana chondrilloides.

The Leaves are oblong, rough, and rugged on the ſurface; the Cup is pyramidal.

Fig. 5. *a b.*

THIS is an Annual, native of France, and Italy; a rough and robuſt Plant, two feet and a half high. The Stalk is furrowed, and reddiſh: the Leaves are pale; and the Flowers are yellow.

6. DELICATE NIPPLEWORT.

Plate 135. Fig. 6.

Character of the Species. Lapſana capillaris.

The Stalks are ſlender, and weak; the radical Leaves are lanced; thoſe on the Stalk are ſpear'd.

Fig. 6. *a b.*

THIS is a very little, delicate and tender Plant, native of the corn-fields of Italy: it is but five inches high. The Leaves are of a fine ſhining green: the Flowers are yellow.

NIPPLEWORT.

o

a b

Generic Character.

a b 1

Branchy Nipplewort.

a b 2

Warty Nipplewort.

a 3 b

Starry Nipplewort.

Harp'd Nipplewort.

Rugged Nipplewort.

Delicate Nipplewort.

WALL-LETTUCE

a

o

a. ..b

Generic Character.

1

Ivy-leav'd Wall-Lettuce?

2

Linear Wall-Lettuce?

3

Leafy Wall-Lettuce.

4

Lanc'd Wall-Lettuce.

GENUS V.

WALL LETTUCE.

PRENANTHES.

Character of the Genus.

The Cup is cylindric: its Scales are long, and only five: the fringe is form'd of three ſhort unequal leafy films. Plate 136. *a a b.*

1. IVY-LEAV'D WALL LETTUCE.

Plate 136. Fig. 1.

Character of the Species. Prenanthes muralis.

The Leaves are harped, and the extream lobe is ſpread like an Ivy-leaf. Fig. 1. *a b.*

THIS is a Biennial, native of our own country, and frequent on old walls and in damp thickets: it flowers in June. It is two feet and a half high, and is a delicate and well-looking, tho' weedy Plant. The Stalk is ſlender, and of a purpliſh brown: the Leaves are naturally of a fine dark green, but they alſo have frequently a tinge of the ſame purpliſh brown: the Flowers are ſmall and yellow, very numerous, and placed in purpliſh Cups.

2. LINEAR WALL LETTUCE.

Plate 136. Fig. 2.

Character of the Species. Prenanthes tenuifolia.

The Leaves are very long, narrow, linear, and undivided. Fig. 2. *a.*

THIS is a Biennial, native of the woods of Spain and Italy; and flowers in July. The Stalk is two feet high, and uſually tinged with purple: the Leaves are like graſs; and, tho' naturally of a fine green, they have often a tinge of browniſh purple: the Flowers are of a delicate crimſon.

3. LEAFY WALL LETTUCE.

Plate 136. Fig. 3.

Character of the Species. Prenanthes viminea.

The Stalk is covered all over with a leafy matter in fine thin threads. Fig. 3. *a.*

THIS is a Biennial, native of Spain and Portugal, and of ſome parts of the South of France. It is a very ſingular Plant: the Stalk is naturally brown; but it is covered with green leafy ſhreds, and is clammy to the touch: the Leaves are of a ſtrong but not pleaſing green: the Flowers are of a pale, but very fine yellow. It flowers in Auguſt.

4. LANCED WALL LETTUCE.

Plate 136. Fig. 4.

Character of the Species. Prenanthes purpurea.

The Leaves are lanced and indented; and only five Florets ſtand in each Cup. Fig. 4. *a b.*

This is an Annual, native of the woods of Italy, Germany, and France; and flowers in July. It is two feet high: the Stalk is ſlender, but firm and brown: the Leaves are of a deep and blackiſh green: the Flowers are crimſon, with a tinge of purple, a deep, and, tho' a fine, yet not a pleaſing colour.

5. TRILOBATE WALL LETTUCE.

Plate 137. Fig. 5.

Prenanthes altiſſima.

Character of the Species.
The Leaves are formed of three great lobes: the Flowers are only five in a Cup.

Fig. 5. *a b.*

This is an Annual, native of Canada and Virginia; flowering in Auguſt: a very ſtately and ſingular, though not handſome Plant. It is five feet high: the Stalk is purple: the Leaves are of a deep ſhining green; but, as they grow higher up the Stalk, they are leſs divided and paler: the Flowers are ſmall and yellow.

6. UMBRELLA'D WALL LETTUCE.

Plate 137. Fig. 6.

Prenanthes alba.

Character of the Species.
The Leaves are ſpear'd and angulated: the Florets are numerous in the Cup.

Fig. 6. *a b.*

This is a Biennial, native of Virginia; and flowers in September. The Stalk is upright, firm, and of a deep purple: the Leaves are of a dark and duſky green: the Flowers are of a pure and perfect white.

7. CREEPING WALL LETTUCE.

Plate 137. Fig. 7.

Prenanthes repens.

Character of the Species.
The Leaves are irregular and trilobate, and the Plant creeps.

Fig. 7. *a b.*

This is a Perennial, native of Siberia; and flowers in Auguſt. The Stalk is naturally ting'd with a deep crimſon: the Leaves are of a coarſe ſtrong green: and the Flowers are pale yellow.

GENUS VI.

GUM-SUCCORY.

Character of the Genus.
The Cup is cylindric, and form'd of numerous, parallel, narrow, linear Scales: the Fringe is form'd of a few ſlight and ſhort leafy Films.

Plate 130. *o a b.*

Of this Genus we know only one Species.

1. RUSHY GUM-SUCCORY.

Plate 130. Fig. 8.

Chondrilla juncea.

Character of the Species.
The radical Leaves are pinnatifid: thoſe on the Stalk are lanced and narrow.

Fig. 8. *a b.*

This is a Perennial; a very troubleſome Weed about the gardens and vineyards in France and Italy; flowering in June. It is two feet high: the Stalk is ſlender, upright, and purpliſh: the Leaves are of a delicate green: and the Flowers are ſmall and yellow: the whole Plant is clammy to the touch.

END OF THE THIRD VOLUME.

WALL LETTUCE.

2

Umbrella'd Wall Lettuce.

Creeping Wall Lettuce.

Trilobate Wall Lettuce.

GUMM SUCCORY.

o

Generic Character.

Rufshy Gumm Succory

Vol. 3

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FINIS.

THE

VEGETABLE SYSTEM.

OR,

The INTERNAL STRUCTURE

AND

The LIFE of PLANTS;

Their PARTS, and NOURISHMENT, Explained;

THEIR

CLASSES, ORDERS, GENERA, and SPECIES,

Aſcertained, and Deſcribed;

In a METHOD altogether NEW:

COMPREHENDING

AN ARTIFICIAL INDEX,

AND

A NATURAL SYSTEM.

With FIGURES of all the PLANTS; Deſigned and Engraved by the AUTHOR.

The Whole from NATURE only.

By JOHN HILL, M. D.

VOL. IV.

Containing the Whole CLASS of ASSOCIATES or CAPITATE PLANTS.

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M.DCC.LXXII.

HERBS,

With many FLOWERS aſſembled in a Common Cup.

SERIES THE SECOND.

Thoſe which have the CHIVES DISTINCT.

CLASS I.

ASSOCIATES.

Character of the CLASS.

Plants with many TUBULAR FLORETS aſſembled together in one Common Cup; and with the Chives diſtinct.

IN the Plants of this Claſs one common Cup contains a great number of Florets, conſtituting what is called the Flower; and in each Floret there are five long Chives, growing upon ſhort threads. Thus far the aſſociates agree with the whole firſt ſeries, the Radiates, Florets, and ſemiflorets: and with the two firſt of thoſe claſſes they agree alſo in ſome reſpect in the conſtruction of the Florets.

THESE, like thoſe which conſtitute the ſecond claſs, and thoſe which form the Diſk in the firſt, are made of a ſingle piece, tubular at the baſe, ſwelling in the body, and cut into five ſegments at the rim: but in the Florets of the Aſſociates, the tubular baſe is long, and the ſegments are alſo long, ſlender and thrown forward; whereas in the others, of both kinds, they are ſhort, broad and turned back. This difference will be obvious on comparing the ſecond figure in the annexed plate 1. with the firſt figure of plate 14, vol. II.

THE great and eſſential diſtinction is not in the body of the Floret but in the Chives. Theſe in all the Plants of the firſt ſeries, whether radiate, naked, or ligulated, unite together at their ſides, and form a regular tube, as at fig. 4. Pl. 14. before mentioned; whereas in the aſſociates they ſtand diſtinct; tho' they riſe parallel with one another: they are altogether looſe at their points, and are free of each other in every other part; being only held together in a columnar or tubular form, reſembling that wherein the others grow, by a membrane which ſurrounds them at the bottom; as repreſented at fig. 5. in the annexed plate. 1.

THIS will be beſt underſtood, in a general way, by comparing the above cited figures of the two claſſical plates: and it is the more neceſſary to be diſtinctly known, becauſe the abſolute ſeparation of the Capitate or Aſſociate from the Radiate, naked, and ligulate, depends upon it; and former authors, even the moſt exact of them, have ſuppoſed the Chives in theſe Plants alſo to cohere. The Aſſociates have therefore been ranged with thoſe other Genera, in one claſs; and inexplicable difficulties have followed.

AS the largeſt Flowers among the aſſociate kind ſhew the parts moſt diſtinct, I have choſen for explaining the general ſtructure, thoſe of the Chardon, the ſeveral views and ſections of which, are the ſubjects of the eight firſt figures of the annexed plate.

A compleat Floret of the Chardoon growing to the ſeed, and furniſhed with its ſtyle as well as filaments, is repreſented at plate 1. fig. 1. *a* is the Seed, from the ſummit of which the Floret riſes: *b* is the down of that ſeed, naturally covering the tubular Baſe of the Flo-

ret: *c* is the upper part of the baſe of the Floret: *d* is the ſwelling body of the Floret, in which are contained the Chives, growing on their ſhort threads: *e* are the five ſegments of the Floret: *f* ſhews the five Chives: and *g* the long ſtyle of the Floret, which they ſurround.

AT fig. 2. is repreſented the Floret alone, ſeparated from the ſeed and its down without, and cleared of the Chives and ſtyle from within.

AT fig 3. is given a Floret cut open to ſhew the origin and diſpoſition of the Chives and their threads. The ſtyle is removed in this and the ſucceeding figures except 6. as it would diſturb the view. Here *a* is the tubular baſe of the Floret; *b* its ſwelling body, within which are ſhewn the five diſtinct Chives *c*, and their ſupporting threads *d*: *e e* are the ſegments of the Floret.

AT fig. 4. is repreſented the body of the Floret, diſincumbered of its tubular baſe; cut open, and a little enlarged; as it would appear if viewed with a common reading glaſs. Here the abſolutely ſeparate edges of the Chives are ſhewn; *a a*, and the thin membrane *b*, which keeps them together at the bottom.

FIG. 5. ſhews the Chives, with their threads, ſeparated from the body of the Floret, where their points *c*, gape more, as being at liberty from the preſſure of the Floret, and their baſes are kept together by the membrane *b*.

FIG. 6. ſhews the Chives and ſtyle taken together out of the body of the Floret. *a* is the pale baſe of the ſtyle, which runs thro' the whole Floret.

AT fig. 7. are repreſented two views of the body of the Chives cut open thro' the baſe; and ſpread flat, to ſhew their natural looſe and free ſtate, and the courſe of the membrane which holds them together at the bottom. *a* is a view of the inſide, and *b* of the outſide, on which part the membrane is placed.

FIG. 8. repreſents one filament alone, with a portion of the membrane behind it.

THE Character of the claſs being thus underſtood, we may proceed to its ſubdiviſions.

OF

The SUBDIVISIONS of this CLASS.

THE Claſs of Aſſociates comprehends the THISTLES, BLUEBOTTLES and KNAPWEEDS; and all that are uſually called *Capitate*, or *headed* Plants.

THESE amount to a very conſiderable number; and the knowledge of them has been accounted difficult, becauſe they have been arranged under a very ſhort detail of Genera: this makes the ſpecies extremely numerous under each genus; and in the *Centaurea*, in particular, according to the moſt received method they are no leſs than *ſixty-one*.

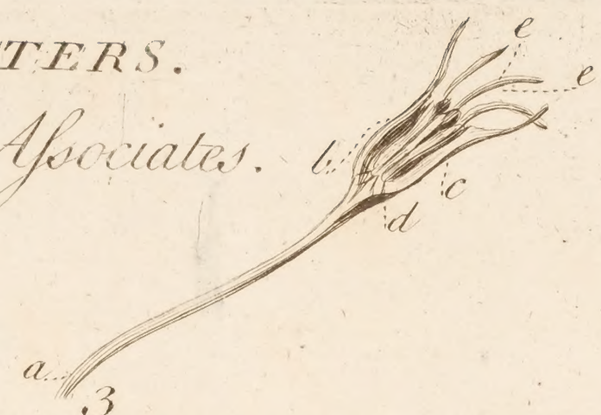
NATURE has not allowed indeed to the Aſſociates thoſe plain and obvious marks of diſtinction which we find among the *Radiated*, *tubulated*, and *ligulated* kinds; in which ſome have the Cup *entire*, ſome *ſimple*, others *double*; and only a certain number *tiled*; for in theſe Plants, all have the Cup TILED.

BUT there are other marks, perhaps as evident when pointed out; certainly as diſtinct as thoſe; whereby the numbers which compoſe this hitherto perplexed claſs, may be reduced to method, under the greater diviſions firſt of *Tribes and Orders*; and then to certain Genera: knowing theſe, all the difficulties will vaniſh: for whoſoever will examine the objects with due care, will find, in all inſtances, that theſe deplor'd perplexities have their foundation in art only; not in Nature.

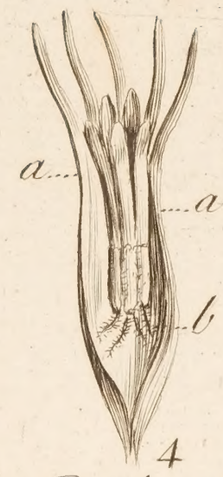
CHARACTERS of The Claſs of Aſſociates.

1 A Complete Floret of the Chardoon.

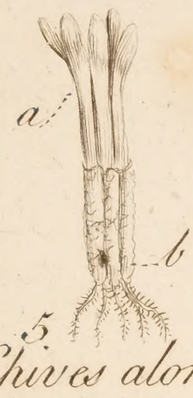
2 The Floret alone.



3 The Floret cut open.

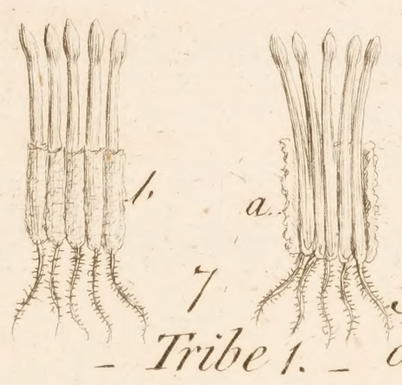


4 The Body of the Floret enlarg'd.



5 The Chives alone.

6 The Chives and Style.



7 The Chives cut open.

8 One Chive or Filament separated.

Tribe 1. — Aſſociates with degradative Scales.

Saff-flower. 9

Bleſsed Thiſtle. 10

Tribe 2. — Aſſociates with diſtinct Scales.

Carline Thiſtle. 11

Cotton Thiſtle. 12

Gentle Thiſtle. 13

Sweet Sultan. 14

Tribe 2. Family 1. — Aſſociates with original and Arm'd Scales.

Spear Thiſtle or Speary Bank Thiſtle. 15

Lady's Thiſtle, or Milk Thiſtle. 16

Solſtitial Thiſtle. 17

Family 2. — Aſſociates with original and hair'd Scales.

Soft Thiſtle. 18

Blue Bottle. 19

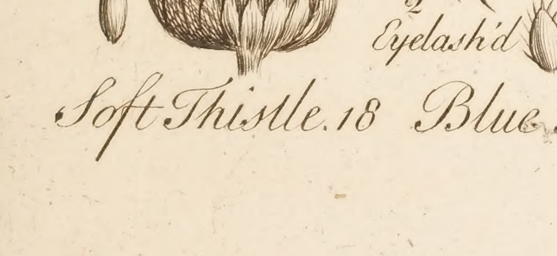
White-head. 20

Seſſile Centaury or Wirenweed. 21

Phrygian Knapweed or Plume-wort. 22

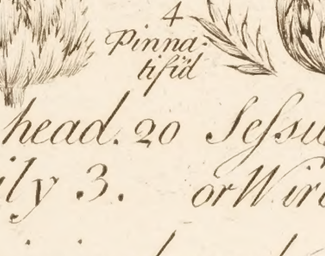
Roman Malfellon or Palmweed. 23

Family 3. — Aſſociates with original and naked Scales.



Vol. 4 Chardoon Artichoke. 24

Rhapontick. 25



Woollweed. 26

Bullweed. 27

Ragged Jawwort or Tornweed. 28

CLASS I.

The Aſſociates may be diſtinctly arranged under two general TRIBES.

TRIBE I.

Thoſe which have the Scales of the Cup formed by a degradation of the Leaves.

TRIBE II.

Thoſe which have the Scales of the Cup, original, and altogether diſtinct.

ASSOCIATES.

TRIBE I.

With DEGRADATING SCALES.

ORDER I.

In which the degradating Leaves form *Scales only*, as in Saff-flower.

Plate 1. Fig. 9.

ORDER II.

In which the lower range of degradating Leaves becomes *filmy*, as in Bleſſed Thiſtle.

Plate 1. Fig. 10.

ORDER III.

In which the upper Range of degradating Leaves becomes *membranaceous*, as in Carline Thiſtle.

Plate 1. Fig. 11.

ASSOCIATES.

TRIBE II.

With ORIGINAL and DISTINCT SCALES.

THE Aſſociates of this Tribe, which are very numerous, admit an intermediate diſtinction, into three ſeparate FAMILIES, according to the Nature of their Scales; before we deſcend to the Subdiviſion into Orders.

TRIBE II.

FAMILY THE FIRST.

With *arm'd* Scales; each Scale terminating in a robuſt hard Thorn; as in cotton Thiſtle.

Plate 1. Fig. 12.

FAMILY THE SECOND.

With *hair'd* Scales; each terminating in a weak ſoft and pointleſs hair, as in Gentle Thiſtle.

Plate 1. Fig. 13.

FAMILY THE THIRD.

With *naked* Scales; each Scale terminating ſimply without Thorn or hair, as in Sweet Sultan.

Plate 1. Fig. 14.

ASSOCIATES. TRIBE II. FAMILY I.

With *original* and *armed* Scales.

ORDER

ORDER I.

With the Scales.

Arm'd only at the Extremity or point; as in Spear Thiſtle. Plate 1. Fig. 15.

ORDER II.

Arm'd both at the point and along the ſides; as in Lady's Thiſtle. Plate 1. Fig. 16.

ORDER III.

Ramoſe or divided into arm'd branches; as in Solſtitial Thiſtle. Plate 1. Fig. 17.

ASSOCIATES. TRIBE II. FAMILY II.

With *original* and *hair'd* Scales.

ORDER I.

With the Scales.

Simple, and only terminated by a ſingle hair; as in Soft Thiſtle. Plate 1. Fig. 18.

ORDER II.

Eyelaſh'd or edg'd all round with hairs, as in Blue-bottle. Plate 1. Fig. 19.

ORDER III.

Serrated, or notched, and hairy on the edges, as in Whitehead. Plate 1. Fig. 20.

ORDER IV.

Pinnatifid, or cut deep like a winged Leaf, and hair'd; as Seſſile Centaury. Plate 1. Fig. 21.

ORDER V.

Feathery, or divided into plumoſe hairy parts; as in Phrygian Knapweed. Plate 1. Fig. 22.

ORDER VI.

Palmated, or divided like a hand, and hairy; as Roman Matfellon. Plate 1. Fig. 23.

ASSOCIATES. TRIBE II. FAMILY III.

With Original and Naked Scales.

ORDER I.

With the Scales.

Simple; or naked and altogether undivided as in Chardoon. Plate 1. Fig. 24.

ORDER II.

Indented, or cut into teeth along the edges, as in Rhapontic. Plate 1. Fig. 25.

ORDER III.

Winged, or cut into deep diviſions, like winged Leaves, as in Wool-weed. Plate 1. Fig. 26.

ORDER IV.

Fingered, or cut into deep diviſions at the Baſe, like Fingers; as in Harp'd Bullweed. Plate 1. Fig. 26.

ORDER V.

Ragged, or ſubdivided into a multitude of looſe Segments, as in Ragged Saw-wort. Plate 1. Fig. 27.

DISTAFF THISTLE.

O

b....
a....

Generic Character.

Vol. 4

Cottony Distaff Thistle.

HERBS.

With many FLOWERS assembled in a Common Cup.

SERIES II.

With the CHIVES DISTINCT.

CLASS IV.

ASSOCIATES.

TRIBE I.

With Degradating Scales.

ORDER I.

With the Cup composed entirely of Scales formed of Degradating Leaves.

GENUS I.

DISTAFF-THISTLE.

PHONUS.*

CARTHAMUS† LINNÆI.

Character of the Genus.

The Leaves of the Plant form the Scales of the Cup; degenerating gradually as they rise along it. 1. Those at the Base are perfect, pinnatifid, green Leaves; 2. The series above these are dry and scaly, but are still pinnatifid; retaining their form, only pointed and edged, with perfect Thorns; 3. The inner series deposit wholly their leafy form, and nature; becoming simple, undivided Scales, arm'd only with a crimson thorn at the Point.

Plate 2. *o a b c.*

1. COTTONY DISTAFF THISTLE.

Plate 2.

Character of the Species. Carthamus lanatus.

The Tops of the Branches are covered with a Cottony matter.

Plate 2. *a b.*

THIS is an Annual, native of France and Italy, an upright, and not unhandsome Plant, of two foot high. The Leaves are of a yellowish green, but they have high red ribs: the Flowers are large and of a bright yellow. The whole Plant abounds with a blood-coloured Juice, which runs out, wherever it is cut or broken.

* This is a proper Atractylis of the antients: but custom has now given that name, in compliance with the dictates of Linnæus, to the Carline. I have therefore given this, and the others of this kind, Gesner's name *Phonus*, which yet remains distinctive.

† It has been a custom to make the Genera in this Class few, and extensive: but difficulty always attends that practice; not to say confusion. I have therefore judged it useful to enlarge the number of Genera; and the student will see nature has given sufficient means of such distinction; but to obviate the possibility of error, the name of the Linnæan Genus is always added; sometimes of two, as nature has demanded.

2. DWARF DISTAFF THISTLE.

Plate 3. Fig. 2.

Character of the Species. Carthamus Mitiſſimus.

The Radical Leaves are lanc'd and dented; theſe on the Stalk are pinnatifid, and edged with ſlight and weak Thorns.

Fig. 2. *a b c.*

THIS is a Perennial, native of the South of France; a low, and very ſingular Plant, flowering in July and Auguſt. The Root creeps under the ſurface, and puſhes up in diſtant ſpots little cluſters of dark green Leaves edged with weak Thorns. The Stalk is but two or three inches high, the Leaves are of a deep green, and the Flower of a very bright blue.

3. SHRUBBY DISTAFF THISTLE.

Plate 3. Fig. 3.

Character of the Species. Carthamus arboreſcens.

The Stem is woody, and the Leaves are of the form of a flaming ſword.

Fig. 3. *a b.*

THIS is a native of Spain, a woody Plant of five foot high, and flowers in June. The Leaves are of a bluiſh green, the Stalk is brown toward the Baſe, but the young ſhoots are tender. The flowers are large and of a perfect gold yellow. It lives thro' common winters in the open air with us, but periſhes in hard ſeaſons, unleſs ſheltered.

4. ELEGANT DISTAFF THISTLE.

Plate 3. Fig. 4.

Character of the Species. Carthamus Carduncellus.

The Leaves are deeply pinnatifid, and arm'd with hard Thorns.

Fig. 4. *a.*

THIS is a Perennial, native of Spain and Italy, and flowers in Auguſt; a very elegant and ſingular Plant. It is not more than ſix inches high. The Leaves are cut in a beautiful manner, and arm'd at all the diviſions with brown Thorns. The Flower is large and of a deep ſhining blue.

GENUS

DISTAFF THISTLE.

2

2 *Dwarf Distaff Thistle?*

4 *Elegant Distaff Thistle.*

Shrubby Distaff Thistle.

SAFF FLOWER.

Generic Character.

Oval leav'd Saff Flower.

Azure Saff Flower.

GENUS II.

SAFF-FLOWER.

CARTHAMUS.

Character of the Species.

The Leaves of the Plant form the Scales of the Cup, which continue leafy even to the innermoſt Range.

1. OVAL-LEAVED SAFF-FLOWER.

Plate 4. Fig. 1.

Character of the Species. Carthamus Tinctorius.

The Leaves are oval and undivided, but arm'd with Thorns along the Edge.

Fig. 1. *a b.*

THIS is a native of the Eaſt; an Annual of two foot high, flowering in Auguſt. The Stalk is of a deep green, often tinged with brown. The Leaves are of a paler, but not very elegant, green; and the thorns along their edge are whitiſh. The Flowers are large; and of a ſtrong yellow, approaching to orange colour; ſo beautiful that they emulate the colour of Saffron; and have been named thence Baſtard Saffron. The colour is laſting, and the Flowers are uſed in vaſt quantities in dying.

2. AZURE SAFF-FLOWER.

Plate 4. Fig. 2.

Character of the Species. Carthamus Cæruleus.

The Leaves are lanced, and cut in deeply at the edges.

Fig. 2. *a b.*

THIS is a Perennial, native of Spain and Italy, a weed among their corn, as troubleſome as the Thiſtles to our farmers. The Stalk is ſimple, and two foot high. The Leaves are of a pleaſant green; and the Flower is of a very elegant blue, ſomewhat paler than our great Bluebottle, but much more delicate, and brighter. It blows in Auguſt.

ORDER II.

With the Cup compoſed of Scales form'd of degradating Leaves; and with the outer Range of the Scales filmy.

GENUS I.

BLESSED THISTLE.

CNICUS.

Character of the Genus.
The Cup is oval, and has a leafy Circlet at the Baſe. The inner Ranges of Scales terminate in hard and branched Thorns.

Plate 5. *a b.*

1. SPREADING BLESSED THISTLE.

Plate 5. Fig. 1. CARDUUS BENEDICTUS.

Cnicus Benedictus.

Character of the Species.
The Leaves are irregularly ſinuated; the Stalk divides into many ſpreading Branches.

Fig. 1. *a b.*

THIS is an Annual, native of the Eaſt, and of the warmer parts of Europe; the Iſlands of the Archipelago are not more over-run with it than the plough'd lands of Spain. It is two foot high. The Stalk divides into a number of long branches, which ſpread out wide; the Leaves are of a ſtrong green with ſome caſt of yellowiſh; and the Flowers are of a pale yellow. The whole Plant has a ſtrong, but not diſagreeable, ſcent. It flowers in Auguſt.

2. VARIOUS LEAVED BLESSED THISTLE.

Plate 5. Fig. 2.

Cnicus Oleraceus.

Character of the Species.
The lower Leaves are deeply cut and jagged, the upper ones are undivided, and ſtand hollow.

Fig. 2. *a b.*

THIS is a Perennial, native of Germany, and other parts of Europe, but not of England. It flowers in June. The Stalk is near a yard high. The Leaves are of a ſtrong, but ſomewhat browniſh green. The Flowers are of a pale, but not diſagreeable yellow.

GENUS

BLESSED THISTLE.

Generic Character.

Spreading Blessed Thistle.

Various leav'd Blessed Thistle.

EGG THISTLE.

P. 9

Pl. 6

a

b

o

Generic Character.

1

Sharp Egg Thistle.

2

Unarm'd Egg Thistle.

3

Siberian Egg Thistle.

GENUS II.

EGG-THISTLE.

CREPULA.

CNICUS LINNÆI.

Character of the Genus.

The Cup is egg-ſhaped, and has a leafy Circlet at the Baſe; the inner ranges of Scales terminate in ſoft and ſimple ſpines.

Plate 6. *o a b c.*

1. SHARP EGG-THISTLE.

Plate 6. Fig. 1.

Character of the Species — Cnicus Spinoſiſſimus.

The Leaves are deep cut in an irregular pinnatifid manner; and are arm'd with numerous ſtrong Thorns: the Flowers ſtand cloſe among the Leaves.

Fig. 1. *a b.*

THIS is a Biennial, native of Germany and Swifferland, and flowers in Auguſt. The Stalk is ſimple and about a foot high; pale and hard. The Leaves are of a faint, but not unpleaſing green. The Flowers are whitiſh, with a daſh of yellow; as are alſo the Scales of the Cup, and the Circlet at its Baſe.

LET none wonder that I have ſeparated the three Plants of this plate from the two of the preceding, under a new Genus: the diſtinction in the Cups is great and obvious; and to the want of ſuch ſeparate arrangements is to be attributed the confuſion hitherto complained of in the Thiſtle Claſs.

2 UNARMED EGG-THISTLE.

Plate 6. Fig. 2.

Character of the Species. — Cnicus Centauroides.

The Leaves are doubly pinnatifid, and they are deſtitute of Thorns.

Fig. 2. *a b.*

THIS is a Perennial; native of the Pyrenæan mountains: a Plant of four foot high, with elegantly divided Leaves, and large Flowers. The Stalk is pale, and not much branched: the Leaves are of a faint green on the upper ſide, and whitiſh underneath. The Flowers are crimſon; and they blow in Auguſt.

3. SIBERIAN EGG-THISTLE.

Plate 6. Fig. 3.

Character of the Species: — Cnicus Cernuus.

The Flowers droop; the Leaves are lanc'd and hearted at the baſe, curl'd at the Edge and prickly.

Fig. 3. *a b c.*

THIS is a Biennial, native of Siberia; a Plant of a foot and an half high, flowering in Auguſt. The Stalk is browniſh: the Leaves are of a fine green: the Flowers droop a little, and are of a delicate crimſon. The Cups are a little jagged towards the top, but the Thorns are ſoft and ſimple.

THIS is the Plant which in the order of nature connects the preſent and preceding Genus.

ORDER III.

With the Cup form'd of degradating Leaves, the inner Range of which are hard, dry, and ſcaly.

GENUS I.

CARLINE THISTLE.

CARLINA.

Character of the Genus.

The inner row of Scales in the Cup ſpread, and ſhine; and emulate the rays of radiated Flowers.

Plate 7: *a a b.*

1. HUMBLE CARLINE THISTLE.

Plate 7. Fig. 1.

Character of the Species — Carlina acaulos.

The Stalk is ſo ſhort that the Flower ſeems to reſt upon the ground.

Fig. 1. *a.*

This is a Perennial, native of Italy, Germany, and other Parts of Europe: a low but ſpecious Plant, flowering in July. The Leaves lie ſpread upon the ground, and are naturally of a deep green; but tinged and blotted as it were with red and white, and blue, and other colours. The Flower reſts in the center of the tuft, having a Stalk too ſhort for ſight. It is very conſpicuous; the inner range of Scales, which have the appearance of Rays, being pearly white.

2. CRIMSON CARLINE THISTLE.

Plate 7. Fig. 2.

Character of the Species. — Carlina lanata.

The Leaves are covered with a Cottony Down.

Fig. 2. *a.*

THIS is an Annual, common on the waſte grounds of Italy, and the South of France; and flowers in July. The Stalk is ſimple, and a foot and half high, whitiſh and downy. It is uſually forked at the top; one Flower crowning the natural ſummit, and two others riſing on ſhoots, one from each ſide of the firſt. The Leaves are white, and the Flowers are of a delicate crimſon.

3. CLUSTERY CARLINE THISTLE.

Plate 7. Fig. 3.

Character of the Species. — Carlina vulgaris.

The Stalk breaks into ſeveral ſhort and compact diviſions at the top, and the Flowers ſtand cloſe upon the heads of theſe, without other Footſtalks.

Fig. 3. *a b.*

THIS is an Annual, native of Italy and Spain; and flowers in Auguſt. It riſes to two foot in heighth; the Stalk is yellowiſh; the Leaves are of a yellowiſh green, and the Flowers are yellow.

CARLINE THISTLE.

Generic Character.

CARLINE THISTLE.

Branchy Carline Thistle.

Side flowering Carline Thistle?

White Carline Thistle.

4. BRANCHY CARLINE THISTLE.

Plate 8. Fig. 4. WILD CARLINE THISTLE.

Character of the Species. Carlina Corymbosa.

The Stalk divides at the head into many ſpreading Branches, and the Flowers have Footſtalks.

Plate 4. *a b.*

THIS is an Annual, native of our dry upland paſtures, and flowers in July. 'Tis two foot high. The Leaves are of a faint green, edg'd with ſharp brown thorns: the Flowers are yellow, the Colour is not fine, but they are very laſting.

5. SIDE FLOWERING CARLINE THISTLE.

Plate 8. Fig. 5.

Character of the Species. Carlina Racemoſa.

The Flowers are few and grow cloſe in the boſoms of the Leaves up the ſides of the Stalk.

Fig. 5. *a.*

THIS is an Annual, native of the dry waſte grounds in Spain; and flowers in Auguſt. The Stalk is ſimple, yellowiſh, and about a foot high; the Leaves are of a yellowiſh green, and have large, but not ſtrong, thorns along their edge; the Flowers are yellow.

6. WHITE CARLINE THISTLE.

Plate 8. Fig. 6.

Character of the Species. Carlina Pyrenaica.

The Leaves run down the Stalk in prickly welts. The Flowers ſtand cloſe upon the Summit.

Fig. 6. *a b.*

THIS is a Biennial, native of the Pyrenæan mountains, on the ſide of Spain; and flowers in Auguſt. The Stalk is white welted, very prickly, and a little more than a foot in heighth: the Leaves are cut deep in the winged manner, and are of a whitiſh green: the Flowers ſtand in a compact riſing head at the top of the Stalk, and are of a gloſſy white.

TRIBE

TRIBE II.

With original and distinct Scales.

FAMILY THE FIRST.

The Scales being arm'd, or terminated by a hard thorn.

ORDER I.

Arm'd only at the Point.

GENUS I.

MAY THISTLE.

POLYCANTHA.

CARDUUS LINNÆI.

Character of the Genus.

The Cups are cylindric, and their Scales are linear.

Plate 9. *a a b.*

1. DOWNY MAY THISTLE.

Plate 9. Fig. 1.

Character of the Species. Carduus Acanthoides.

The Cups are covered with a hairy down, and droop a little.

Fig. 1. *a.*

THIS is an Annual, native of our ditch-banks, and waſte ground by roads; but not very common; a plant of two foot high, flowering in the beginning of May, and ſoon after fading. The Leaves are hairy, and of a faint whitiſh green: the Flowers are of a bright crimſon.

2. MARSHY MAY THISTLE.

Plate 9. Fig. 2.

Character of the Species. MARSH THISTLE. Carduus Paluſtris.

The Cups are naked and erect, and the Leaves are pinnatifid.

Fig. 2. *a b.*

THIS is a Biennial, native of our wet grounds, and flowers at the latter end of May; a tall and ſpecious Plant. The Stalk is purpliſh, and is ſix foot high: the Leaves are of a deep browniſh green: the Flowers are of a full crimſon.

3. CURLED MAY THISTLE.

Plate 9. Fig. 3.

Character of the Species. Carduus Criſpus.

The Flowers are cluſtered, and the Cups are naked; the Leaves are wav'd.

Fig. 3. *a b.*

THIS is an Annual, native of our ditch-banks, and flowers in May. The Stalk is four foot high; the Leaves are of a duſky green, and the Flowers pale crimſon.

MAY-THISTLE.

b. a

Generic Character.

Vol. 4

1

b. a

Downy May Thistle.

2

a b

Marshy May Thistle.

3

b. a

Curl'd May Thistle.

FISH-THISTLE.

GENUS II.

FISH-THISTLE.

ACARNA.

CARDUUS LINNÆI.

Character of the Genus.

The Cups are elliptick, their Scales are broad, and terminated by ſhort and ſlight Thorns.

Plate 10. *a & b.*

1. DOUBLE--THORN FISH-THISTLE.

Plate 10. Fig. 1.

Character of the Species. Carduus Acarna.

The Leaves are lanced, waved, and armed with double Thorns.

Fig. 1. *a b c.*

THIS is a Biennial, native of Spain, and flowers in Auguſt. 'Tis a robuſt, upright Plant of four Foot high. The Stalk is browniſh, the Leaves are of a faint green, and the Flowers are crimſon.

SOME confound this with the Caſabon Thiſtle, Plate 14. both having been called Acarna, by earlier Writers; this has cauſed the error: The Plants are abundantly diſtinguiſhed by their natural characters.

2. MARBLED FISH THISTLE.

Plate 10. Fig. 2.

Character of the Species. Carduus Leucographus.

The Leaves are pinnatifid, the Flowers ſtand ſingly on long foot-ſtalks, and droop.

Fig. 2. *a b.*

THIS is a Biennial, native of Italy, and flowers in Auguſt. The Plant is near a yard high. The Leaves are of a deep green, beautifully ſtreaked and ſpotted with white, like veins in the Egyptian marble; the Thorns are numerous and robuſt; the Flowers are crimſon.

3. CLUSTERY FISH-THISTLE.

Plate 10. Fig. 2.

Character of the Species. Carduus Onopyxos Authorum.

The Leaves are doubly pinnatifid, and the Flowers ſtand erect and cluſtered.

THIS is an Annual, native of Germany, a Plant of two foot and a half high, and flowers late in September. The Stalk is pale, the Leaves are of a ſtrong green, and armed with very ſharp though ſhort Spines; the Flowers are of a bright crimſon. It is the moſt leafy of all Thiſtles.

GENUS III.

BANK-THISTLE.

ASCALEA.

CARDUUS LINNÆI.

Character of the Genus.

The Cups are bloated: their Scales are long, ſlender, and bend back.

Plate 11. *a b.*

1. DROOPING BANK-THISTLE.

Plate 11. Fig. 1.

Character of the Species. Carduus Nutans.

The Leaves are deep cut, and the Flowers ſtand drooping.

Fig. 1. *a b.*

THIS is a Biennial, native of our damp waſte grounds, and flowers in Auguſt. The Plant is five foot high. The Leaves are of a fine deep green, and the Flowers are crimſon. In the evening they have a muſky ſcent, not unlike that of the Sweet Sultan, but lighter and more delicate. They have it moſt in ground that has leaſt wet. This Autumn, 1761, I ſaw a quantity of it in a waſte ground near Sir Roger Hill's park at Denham, that perfumed the air to ſome diſtance.

2. SPEARY BANK-THISTLE.

Plate 11. Fig. 2.

Character of the Species. Carduus Lanceatus.

The Leaves are divided and ſub-divided into long ſpeary points with very firm Thorns. The Flowers ſtand erect.

Fig. 2. *a b.*

THIS is the commoneſt of all our Thiſtles, a tall, forbidding Plant, armed with ſtrong Thorns, and covered at the top with crimſon Flowers. It is an Annual of ſix foot high. The Stalk is pale; the Leaves are of a faint and dull green; the Flowers are of a bright crimſon. It covers our dry banks and waſte grounds all the latter part of Summer.

GENUS

BANK-THISTLE.

Generic Character.

Drooping Bank Thistle?

Speary Bank Thistle.

COTTON-THISTLE.

Great headed Cotton Thistle.

Narrow leav'd Cotton Thistle.

Broad leav'd Cotton Thistle.

GENUS IV.

COTTON-THISTLE.

ONOPORDUM.

Character of the Genus:

The Cup is egg-ſhaped, and the Points of its Scales ſtand outwards.

Plate 12. *a a b.*

1. BROAD-LEAVED COTTON-THISTLE.

Plate 12. Fig. 1.

Character of the Species. Onopordum Acanthium.

The Leaves are lanced, waved and dented; the Scales of the Cups are ragged at the Baſe.

Fig. 1. *a b.*

THIS is a Biennial, native of our clayey ditch banks, and flowers in July. The whole Plant is white and cottony, except that the Flowers are crimſon. Its broad radical Leaves cover the ground for a great ſpace in Spring; in June the Stem riſes, which grows to four foot high, and is finely edged and welted: the Thorns are yellowiſh and hard.

2. NARROW-LEAVED COTTON-THISTLE.

Plate 12. Fig. 2.

Character of the Species. Onopordum Illyricum.

The Leaves are linear, pinnatifid, and deep cut along the Segments. The Spines of the Cup ſpread wide aſunder.

Fig. 2. *a b.*

THIS is a very elegant Thiſtle, a Biennial, native of Italy and Spain; a Plant of three foot high, very upright and very thorny. It flowers in Auguſt. The Leaves are white and downy; the Flowers are of a fine crimſon.

3. GREAT-HEADED COTTON-THISTLE.

Plate 12. Fig. 3.

Character of the Species. Onopordum Arabicum.

The Leaves are lanced and pinnatifid; the Spines of the Cup are ſhort.

Fig. 3. *a b.*

THIS is a Biennial, native of Spain and Portugal, and of the South of France; a very handſome Thiſtle, flowering in July and Auguſt. It grows to a great height; the Leaves are cottony; the Cup is tinged with brown; and the Flowers are of a very ſtrong and fine crimſon.

GENUS

GENUS V.

FAIR THISTLE.

PTERNIX.

CARDUUS LINNÆI.

Character of the Genus.

The Cup is oblong; its Scales ſtand looſe, and their Points harden into flattiſh Thorns.

Plate 13. *a b.*

1. ONE-FLOWERED FAIR THISTLE.

Plate 13. Fig. 1.

Character of the Species. Carduus Mollis.

The Leaves are linear and pinnatifid; the Stalk ſupports only a ſingle Flower.

Fig. 1. *a b.*

THIS is an Annual, native of the Pyrenæan Mountains, and flowers in July and Auguſt. The Stalk is weak; it leans and bends, and ſcarce riſes to more than a foot high. The Leaves are of a good, but not ſtrong green; the Flower is of a very delicate crimſon, and there is a reddiſh brown often diffuſed over the Cup, which gives ſome beauty.

2. MANY-FLOWERED FAIR THISTLE.

Plate 13. Fig. 2.

Character of the Species. Carduus Defloratus.

The Leaves are lanced and ſerrated: the Flowers are upright while in their bloom; but when they fade they droop.

Fig. 2. *a b.*

THIS is a Biennial, a Plant of two Foot high, native of the high grounds in Germany, and flowers late in Autumn. The Leaves are of a fine green. The Stalk is often brown; the Flowers are of a very delicate crimſon.

THE Thiſtles hitherto deſcribed have all welted Stalks: There follow many which have them naked. The One-flowered Fair Thiſtle naturally leads to theſe, for the weltings of its Stalk are ſlight and inconſiderable.

FAIR THISTLE.

One flower'd Fair Thistle.

Many flower'd Fair Thistle.

PIN THISTLE.

Generic Character.

Way-side Pin Thistle.

Three Thorn'd Pin Thistle.

Lanc'd Pin Thistle.

GENUS VI.

PIN-THISTHE.

IXINE.

CARDUUS LINNÆI.

Character of the Species.

The Cups are cylindric, and their Scales are broad, but terminate in fine Spines, like the Points of the ſmalleſt Pins.

Plate 14. *a a b.*

1. WAY-SIDE PIN-THISTLE.

Plate 14. Fig. 1.

COMMON-WAY THISTLE.

Character of the Species. Carduus Arvenſis.

The Leaves are linear, waved, and deeply pinnatifid.

Fig. 1. *a b.*

THIS is a Perennial, a weed very hateful to our farmers, common among corn, as well as on waſte grounds by way-ſides; and flowers in Auguſt. Its creeping root renders it difficult to be deſtroyed, and its light downy Seeds ſpread it almoſt univerſally. It grows to a yard high; leafy, and full of thorns. The Leaves are of a good green. The Stalk is often reddiſh, and there uſually is a ruddy tinct upon the Cups. The Flowers are crimſon.

2. THREE-THORNED PIN-THISTLE.

Plate 14. Fig. 2.

Character of the Species. Carduus Caſabonæ.

The Leaves are lanced and waved, and the Thorns ſtand in Threes.

Fig. 2. *a.*

THIS is a Perennial, native of Spain; a ſingular and very handſome Plant, flowering in Auguſt. The Leaves are of a yellowiſh green on the upper ſide, and white underneath. Their Spines are yellow: the ſtalk riſes to five foot in height, and its Flowers are of a pale orange colour.

3. LANCED PIN-THISTLE.

Plate 14. Fig. 3.

Character of the Species. Carduus Tuberoſus.

The Leaves are lanced and ſlightly pinnatifid.

Fig. 3. *a.*—

THIS is a Perennial, native of France and Germany, a low weak Plant, flowering in July and Auguſt. The Leaves are of a deep unpleaſing green: the Stalk is tender, and two foot high. The Flowers are of a pale but pleaſing crimſon.

GENUS VII.
BRISTLY THISTLE.
TETRALIX.
CARDUUS LINNÆI.

Character of the Genus.

The Cups are cylindric with a bloated baſe; the Spines of their Scales reſemble briſtles rather than thorns.

Plate 15. *a b.*

1. LANCED BRISTLY THISTLE.

Plate 15. Fig. 1.

Character of the Species. Carduus Flaveſcens.

The Leaves are lanced, dented, and ſeſſile.

Fig. 1. *a b.*

THIS is a Biennial, native of Spain, and flowers in July. The Stalk is brown, and two foot high: the Leaves are of a ſtrong but yellowiſh green: the Flowers are of a pale ſtraw colour; often abſolutely white.

2. AMPLEXICAUL BRISTLY THISTLE.

Plate 15. Fig. 2.

Character of the Species. Carduus Tartaricus.

The Leaves are ſerrated and embrace the Stalk: the Cup has a Circlet of three Leaves at its baſe.

Fig. 1. *a b.*

THIS is a Perennial, native of Ruſſia, and flowers in September. The Stalk is three foot high; the Leaves are of a ſtrong, but not pleaſing green; and have a very little downy matter underneath: the Flowers are ſnow white. The Thorns both of the Leaves and Cup are firm, but not very acute.

3. WOOLLY HEADED BRISTLY THISTLE.

Plate 15. Fig. 3.

WOOLLY-HEADED THISTLE.

Character of the Species. Carduus Eriophorus.

The Leaves are doubly pinnatifid, with raiſed ſegments; and the Cups have a downy matter about their ſcales.

Fig. 3. *a b.*

THIS is a Biennial, native of our high grounds, and flowers in Auguſt. It is an erect, robuſt, and very handſome Plant. The Stalk is of a browniſh red; the Leaves are not of a very ſtrong, but an extremely delicate green. The Flowers are of a bright crimſon. It has leſs the air of a native Plant of our country, than moſt others, and is far from being univerſal among us. By what I have ſeen, it is found only in the midland counties, Northamptonſhire, and the three or four adjacent.

BRISTLY THISTLE.

Generic Character.

Lanc'd Bristly Thistle?

Amplexicaul Bristly Thistle?

Woolly-headed Bristly Thistle?

MILK-THISTLE.

Generic Character.

Marbled
Milk Thistle.

ORDER II.

With the Scales of the Cup, armed both at the point and along the ſide with thorns.

GENUS I.

MILK THISTLE.

MARIANA.

CARDUUS LINNÆI.

Character of the Genus.

The Scales of the Cup have ſide ſpines continued all their length.

Plate 16. *a a b.*

Of this Genus we know only one Species.

1. MARBLED MILK-THISTLE.

Milk Thistle.

Character of the Species. Carduus Marianus.

The Leaves embrace the Stalk, and are lightly pinnatifid.

Fig. 1. *a b.*

THIS is a Biennial, native of our waſte grounds, a tall and ſtately Plant, flowering in Auguſt. Only its being common, makes us overlook its extreme beauty: In my garden at Bayſwater, where every thing has its proper place, and where this Plant ſtands out of the way of duſt and accidents, many perſons have ſtopped to look at it with wonder; and have thought, as all others would have thought if it had been brought from abroad, that it was one of the firſt in beauty of the Exotics.

THE Leaves are of a deep green, veined and blotched with a pure milk white, in the manner of the fineſt marbles. They are of a vaſt ſize; the Stalk in the midſt is as thick as a child's arm; the Flowers which crown it in vaſt multitudes, are very large, and of a fine ſtrong crimſon. Their Cups are green, and formed with an uncommon greatneſs and elegance, very far exceeding all other Thiſtles.

'TIS ſaid the Seeds of this Plant will cure Cancers; and great names authorize the account: but I have tried, and found them ineffectual. This is not a place for diſquiſitions on the virtues of Plants, we are concerned here only with their forms; in the ſucceeding natural method their qualities are to be examined; but matters of great importance ſhould not be paſſed over here; and 'tis next to recommending a uſeful medicine, to caution againſt a dependance on ſuch as will deceive.

GENUS

GENUS II.

STAR THISTLE.

1. CALCITRAPA.

CENTAUREA LINNÆI.

The Scales of the Cup have ſide ſpines only near their baſe.

Plate 17. *a a b.*

VARIOUS LEAVED STAR THISTLE.

Plate 17. Fig. 1.

STAR THISTLE.

Centaurea Calcitrapa.

Character of the Species.

The lower Leaves are pinnatifid, and the upper only ſerrated.

Fig. 1. *a b.*

THIS is an Annual, native of our waſte grounds and way-ſides, and flowers in Auguſt. It is not found in all parts of the kingdom, but of late has ſpread itſelf vaſtly in the neighbourhood of London: the road ſides near Tyburn, and at Brook-Green by Hammerſmith, are in many ſpots quite covered with it.

THE lower Leaves are of a pale green, thoſe higher up are often browniſh; the Stalk is hard and white; not more than two foot high, but wonderfully ſpread into branches; theſe are covered for many weeks with the hard yellowiſh Starry Cups, ſeeming as Flowers before the crimſon Flowers appear.

I had this year, 1761, two varieties of this Plant at Bayſwater; one with the Flowers ſnow white; the other with a broad and almoſt harped leaf. Rauwolf collected ſuch a Plant as this; and Bobart was almoſt led to think it a new Species; but it roſe certainly with me from Seeds of the common kind. Next year will ſhew whether its Seeds produce plants; for I entertain ſome ſuſpicion that it might be a mongrel; the Farina of the Mariana, next to it, impregnating ſome ſeeds *.

2. LANCED STAR THISTLE.

Plate 17. Fig. 2.

Character of the Species.

Centaurea Calcitrapoides.

The Leaves are lanced, and ſerrated, and ſlightly embrace the Stalk.

Fig. 2. *a b.*

THIS is a Biennial, native of Spain, and flowers in July. The Stalk is firm, but not hard and woody as in the Engliſh kind: the Leaves are of a deep green; and the Flowers of a ſtrong crimſon. The Spines or ſtarry matter of the Cup are of a deep brown, not whitiſh as in ours.

* This Plant never appeared ſince.

STAR THISTLE.

a
b
a
b
a
b

SOLSTITIAL THISTLE.

O

a b

Generic Character.

a

1

Harp'd Solstitial Thistle?

a

2

Clustery Solstitial Thistle?

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ORDER III.

With the Scales of the Cup ramoſe, or divided into Branches.

GENUS I.

SOLSTITIAL THISTLE.

SOLSTITIARIA.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup have Spines, edged all their length, with other Spines like Branches.

Plate 18. *a a b.*

1. HARPED SOLSTITIAL THISTLE.

Plate 18. Fig. 1.

Character of the Species. Centaurea Solſtitialis.

The Leaves are pinnatifid with a large Lobe at the extremity.

Fig. 1. *a b.*

THIS is an Annual, native of England, and moſt other parts of Europe; a Plant of two Foot and a half high, flowering at the end of June. The Leaves are of a whitiſh green, and they run down the Stalk in a very elegant manner. The Flowers are of a fine yellow, and the whole Plant has a very handſome aſpect. In France it is ſo common as to be an offenſive weed among the Corn; ſtarving the Crop, and wounding the hands and legs of the Reapers. With us it is ſcarce: It has been found in Glouceſterſhire and Suſſex.

2. CLUSTERY SOLSTITIAL THISTLE.

Plate 18. Fig. 2.

Character of the Species. Centaurea Melitenſis.

The Leaves are lanced and waved, the Flowers ſtand in compact cluſters.

Fig. 2. *a b.*

THIS is a native of the Greek Iſlands; an Annual of two Foot high, flowering in July. The Stalk is pale; the Leaves alſo are of a pale blueiſh green, and the Flowers are yellow.

AT certain ſeaſons, the Leaves and Tops of the Stalks under the cluſters of Flowers are covered with a viſcous ſubſtance, which entangles Flies; but this is not conſtant: It is principally toward the time of flowering.

FAMILY II.

With original and haired Scales.

ORDER I.

With the Scales of the Cup ſimple, and only terminated by a ſingle Hair.

GENUS I.

SOFT THISTLE.

CROCODILIUM.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup are terminated by ſhort and ſomewhat firm Hairs.

1. TWO COLOURED SOFT THISTLE.

Plate 19. Fig. 1.

Character of the Species. Centaurea Muricata.

The lower Leaves are doubly pinnatifid; the uppermoſt are ſimply waved. The Footſtalks of the Flowers are long and naked.

Fig. 1. *ab.*

THIS is an Annual, native of Spain, a very beautiful and ſingular Plant, flowering in Auguſt. The Stalk is tender and whitiſh; the Leaves are of a very delicate whitiſh green: the Flowers are large, and have two colours, which is unuſual in the Plants of this kind; the outer Florets being crimſon, and the inner yellow, with a mixture of white.

2. GOLDEN SOFT THISTLE.

Plate 19. Fig. 2.

Character of the Species. Centaurea Peregrina.

The Leaves are lanced and waved near the Baſe, and they have long naked Footſtalks.

Fig. 2. *ab.*

THIS is a Biennial, native of Spain and Italy, a low Plant, but ſingular and beautiful, flowering in Auguſt. The Stalk is whitiſh, and ſcarce more than a foot high: the Leaves are of a pale whitiſh green, ſoft and downy; the Flower is very noble in its ſize, and altogether yellow.

SOFT THISTLE.

Generic Character.

GENTLE THISTLE.

o

a

b

Generic Character.

a b

1

Indented Gentle Thistle.

b

a

2

Pinnatifid Gentle Thistle.

a

3

Wavy Gentle Thistle.

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3. ROBUST SOFT THISTLE.

Plate 19. Fig. 3.

Character of the Species. Centaurea Crocodylium.

The Leaves are long and pinnatifid, with a broad harpy end.

THIS is a Biennial, native of the Eaſt, a tall and firm Plant full of ſtrong Branches, and flowers in Auguſt. The Stalk is brown; the Leaves are of a ſtrong deep green, the Flowers are very large and crimſon.

GENUS II.

GENTLE THISTLE.

CIRSIUM.

CARDUUS LINNÆI.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup end in long weak and ſtrait Hairs.

Plate 19. *o a b.*

1. INDENTED GENTLE THISTLE.

Plate 20. Fig. 1.

GENTLE THISTLE.

Character of the Species. Carduus Diſſectus.

The Leaves are indented, with weak thorny points.

Fig. 1. *a b.*

THIS is a Perennial, native of our clayey grounds, and flowers early in Auguſt. The Stalk riſes to a yard in heighth. The Leaves are ſoft and pale. The Flowers are large and of a good crimſon. The hairs of the Scales are alſo uſually brown, and ſometimes rediſh. It is not common with us: but at Buddon Wood in Leiceſterſhire there is a great deal of it.

2. PINNATIFID GENTLE THISTLE.

Plate 20. Fig. 2.

Character of the Species. Carduus Cyanoides.

The Leaves are pinnatifid, and their Segments ſimple and undivided.

Fig. 2. *a b.*

THIS is a Perennial, native of Siberia, and flowers in September. The Stalk is two Foot high. The Leaves are of a very dark green on the upper ſide, and white and downy underneath. The Flowers are of a ſtrong crimſon.

3. WAVY GENTLE THISTLE.

Plate 20. Fig. 3.

Character of the Species. Carduus Monſpeſſulanus.

The Leaves are lanced, and undivided, but waved and edged.

THIS is a native of France and Germany; a Perennial, flowering in July and Auguſt. The Leaves are of a deep but bluiſh green; the Stalk is two Foot high; the Flowers are of a deep crimſon.

4. SUPERB

4. SUPERB GENTLE THISTLE.

Plate 21. Fig. 4.

Carduus Altiſſimus.

Character of the Species.

The Leaves are pinnatifid, and their Segments waved and indented.

Fig. 2. *a b.*

THIS is a Perennial, native of Carolina, and flowers late in Autumn. The Plant is twelve Foot high: the Stalk is robuſt, and branchy, and the Leaves of a pleaſant but not ſtrong green. The Flowers are large, and of a pale but beautiful crimſon. The Cups are covered irregularly with a light cottony down.

5. ONE-FLOWERED GENTLE THISTLE.

Plate 21. Fig. 2.

Carduus Virginianus.

Character of the Species.

The Leaves are lanced and prickly, the Stalk ſupports only one Flower.

Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, a low and weak Plant, flowering in September. The Leaves are of a ſtrong green. The Stalk is a Foot and a half high, and rediſh; the Flower is of a ſtrong and elegant crimſon.

6. VARIOUS LEAVED GENTLE THISTLE.

Plate 21. Fig. 3.

Carduus Heterophyllus.

Character of the Species.

The Leaves are lanced, and ſome are deeply cut, others undivided.

Fig. 3. *a b.*

THIS is a Perennial, native of France and Switzerland, a low Plant, flowering in Auguſt. The Leaves are of a pleaſant green on the upper ſide, and downy underneath. The Stalk is pale; the Flowers are of a very bright and beautiful crimſon. There are rarely more than two upon a Stalk, and often one of them imperfect.

GENTLE-THISTLE.

One flower'd Gentle Thistle.

Superb Gentle Thistle.

Various leav'd Gentle Thistle.

GENTLE THISTLE.

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Red Stalk'd Gentle Thistle.

Yellow Gentle Thistle.

7. AMPLEXICAUL GENTLE THISTLE.

Plate 22. Fig. 1.

Character of the Species. Carduus Helenoides.

The Leaves are deeply dented and embrace the Stalk; the Scales of the Cup diverge.

Fig. 1. *a b.*

THIS is a native of Siberia, and many other of the northern parts of Europe, but I have not ſeen it in England. It is a Perennial, tall Plant, flowering in Auguſt. The Leaves are of a deep green on the upper ſide; and white and downy underneath. The Stalk is rib'd and green; the Flowers are of a ſtrong crimſon. There are but few on the Plant, uſually only two on a Footſtalk.

8. RED-STALKED GENTLE THISTLE.

Plate 22. Fig. 2.

Character of the Species. Carduus Serratuloides.

The Leaves are lanced and hard at the edge; the Footſtalk ſupports only one Flower; the Scales of the Cup ſtand cloſe.

Fig. 2. *a b.*

THIS is a Perennial, native of Switzerland, and other of the northern parts of Europe; and flowers in Auguſt. It grows to two Foot and a half high. The Stalk is crimſon; the Leaves are of a very fine bright green on the upper ſide, and whitiſh underneath: they grow to the Stalk by a broad baſe, but do not embrace it: the Flowers are very large and crimſon, and only one crowns each Footſtalk.

9. YELLOW GENTLE THISTLE.

Plate 22. Fig. 3.

Character of the Species. Carduus Flaveſcens.

The Leaves are lanced and indented, the Flowers are numerous on each Footſtalk.

Fig. 3. *a b.*

THIS is a very ſingular and elegant Plant, a Biennial, native of Spain, and flowers in Auguſt. The Stem is two Foot and half high: the Leaves are of a fine freſh green, and the Flowers are of a whitiſh yellow.

10. FEW-LEAVED GENTLE THISTLE.

Plate 23. Fig. 1.

Character of the Species — Centaurea Nudicaulis.

The Stalk is almoſt naked, and ſupports only one Flower.

Fig. 1. *a b.*

THIS is a Biennial, native of Spain, and flowers in September; a low and little Plant. The radical Leaves are of a faint green, and undivided; the others very pale and waved or dented. The Stalk is alſo pale, and the Flower is of a bright crimſon.

11. DWARF GENTLE THISTLE.

Plate 23. Fig. 2.

Character of the Species. — Centaurea Pumilio.

The Flower reſts upon the ground; the Leaves are ſlightly pinnatifid.

Fig. 2. *a b.*

THIS is a Biennial, native of Savoy, and flowers in Auguſt and September. The Leaves are pale and downy; the Flower is of a ſtrong crimſon. It reſts upon the ground almoſt without a Stalk.

12. THICK-WELTED GENTLE THISTLE.

Plate 23. Fig. 3.

Character of the Species. — Centaurea Verutum.

The Leaves are lanced, ſimple and undivided; the Stalk is beautifully welted with thick Films from their Baſe.

Fig. 3. *a b.*

THIS is a Biennial, native of Germany, and flowers in September. The Stalk is firm and brown; the Leaves are of a ſtrong but not very pleaſant green. The Flowers are crimſon.

13. HARD-EDGED GENTLE THISTLE.

Plate 23. Fig. 4.

Character of the Species. — Centaurea Galactites.

The Leaves are waved and hard, and almoſt prickly at their edges; the Stalk is lightly welted.

Fig. 4. *a b.*

THIS is an Annual, native of Germany, and flowers in Auguſt. The Stalk is pale; the Leaves are of a freſh green, marbled with white, and the Flowers are crimſon.

14. BRANCHY

GENTLE-THISTLE.

4

Fen-leav'd Gentle Thistle?

Dwarf Gentle Thistle.

Thick-welted Gentle Thistle.

Hard-Edg'd Gentle Thistle?

GENTLE THISTLE.

5

a

b

a

b

a

b

1

2

3

Branchy Gentle Thistle.

Small Scal'd Gentle Thistle.

Broad-cut Gentle Thistle.

14. BRANCHY GENTLE THISTLE.

Plate 24. Fig. 1.

Character of the Species. Centaurea Cichoracea.

The Leaves are ſawed, and the Points of their indentings very hard; the Stalk divides into many Branches.

Fig. 1. *a b.*

THIS is a Biennial, native of Spain, and flowers in July. The Stalk is firm, and tinged with brown: the Leaves are of a fine freſh green; the Flowers are of a ſtrong crimſon.

15. SMALL-SCALED GENTLE THISTLE.

Plate 24. Fig. 2.

Character of the Species. Centaurea Salamantica.

The Scales of the Cup are minute and compact, and their Hairs bend back; the Leaves are pinnatifid and dented.

Fig. 2. *a b.*

THIS is a Biennial, native of Spain, Sicily, and the South of France, and flowers in Auguſt. The Leaves are downy, ſoft and whitiſh. The Stalk is rib'd, and two foot high; the Flowers are of a delicate crimſon; which has a beautiful effect with the whiteneſs of the Plant.

16. BROAD-CUT GENTLE THISTLE.

Plate 24. Fig. 3.

Character of the Species. Criſium Hallerianum.

The radical Leaves are cut in the winged Manner, with a few broad Segments; the Scales of the Cup are long, and their Hairs curl back.

Fig. 3. *a b.*

THIS is a Biennial, native of Switzerland, a tall and ſtately Plant, flowering in July. The Leaves are of a very deep green on the upper ſide, and white and woolly underneath; the Stalk is ſeven foot high, and rediſh; the Flowers are crimſon; the hairs of the Cup curl backwards.

THIS is the Frontier Plant between the preſent and ſucceeding Genus; partaking almoſt equally of the Characters of Gentle Thiſtle and of Burdock. Its general Form and Habit are truly of the Gentle Thiſtle kind; but its Cups approach ſo nearly to the Burdock, that if the Hairs where they curl were only bent firmly down, they would be Burdock Heads.

THE Gentle Thiſtle and Burdock are evidently diſtinct Genera in Nature; but this is an intermediate Plant, properly of neither Genus, but partaking of both; and in the Scale of Nature leading gently down from one to the other; filling the imagined Gap between them. The preceding Species begins, this compleats the gradation.

GENUS II.

BURDOCK.

LAPPA.

Character of the Genus.

The Scales of the Cup are terminated by firm Hairs, which bend back at their Points, and form a kind of Hooks.

Plate 25. *a a b.*

1. ROUND-HEADED BURDOCK.

Plate 25. Fig. 1.

COMMON BURDOCK.
Lappa Vulgaris.

Character of the Species.

The Cups are round and even at the Base.

Fig. 1. *a b.*

THIS is a Biennial, native of our way-sides, and flowers in August. The Leaves are of a strong green; the Stalk is two Foot high; the Cups are round and green; the Flowers are of a bright crimson.

2. OVAL-HEADED BURDOCK.

Plate 25. Fig. 2.

WOOLLY-HEADED BURDOCK.
Lappa Arctium.

Character of the Species.

The Cups are oval, and dented in at the Base.

Fig. 2. *a b.*

THIS is a Biennial, common by our way-sides, and flowers in August. The Leaves are vast, and of a strong green; the Stalk is tinged with red, and the Flowers are crimson. The Cups are red, but covered with a white downy matter: The Plant is a Yard high, and vastly branched.

3. OBLONG-HEADED BURDOCK.

Plate 25. Fig. 3.

Lappa Minor.

Character of the Species.

The Heads are oblong, and smallest at the Ends.

Fig. 3. *a.*

THIS is a Biennial, native of our dry waste grounds, and flowers in August. The Leaves are of a dark green; the Stalks are red, and the Flowers are small and of a pale crimson.

LINNÆUS makes these three only varieties of one Species, and he adds the preceding Gentle Thistle to the same Genus; but Nature contradicts this decision. These are distinct; and that is not of the Genus; but the connecting Plant.

THE second Species is the Bardana, eminent against the Gout and Rheumatism. The inner Bark of the Root contains its principal Virtue.

BURDOCK.

Generic Character.

Oblong-headed Burdock?

Oval headed Burdock?

Round-headed Burdock?

BLUE BOTTLE.

Generic Character.

Welted Blue Bottle.

Hoary Blue Bottle.

Grassy Blue Bottle.

ORDER II.

With the Scales of the Cup eye-laſhed, or edged all round with Hairs.

GENUS I.

BLUE-BOTTLE.

CYANUS.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup are egg-ſhaped, and edged with ſhort firm Hairs.

Plate 26. *o a b.*

1. WELTED BLUE-BOTTLE.

Plate 26. Fig. 1.

GREAT BLUE-BOTTLE.

Character of the Species. Centaurea Montana.

The Leaves are lanced and ſmooth, and they run down the Stalk.

Fig. 1. *a.*

THIS is a Perennial, native of Switzerland, and of the mountainous parts of many other kingdoms; it grows to a Foot and a half high, and flowers in Auguſt. The Leaves are of a ſtrong ſhining green: the Stalk alſo is green; the Hairs of the Cup are perfectly black; and the Flowers are of a very beautiful blue.

2. HOARY BLUE-BOTTLE.

Plate 26. Fig. 2.

Character of the Species. Centaurea Montana.

The Leaves are oval and hoary, and run a little down the Stalk.

Fig. 2. *a b.*

THIS is a Perennial, native of Pyrenees, and flowers in Auguſt. The Plant grows to two Foot high; the Leaves are covered with a downy matter; the Flowers are of a very delicate blue.

3. GRASSY BLUE-BOTTLE.

Plate 26. Fig. 3.

CORN BLUE-BOTTLE.

Character of the Species. Centaurea Cyanus.

The Leaves are graſſy, and have high Ribs.

Fig. 3. *a.*

THIS is an Annual, native of our Corn-fields, and flowers in Auguſt. The Stalk is tough, rib'd, and two Foot and a half high; the Leaves are of a dead faint green: The Flowers are blue. In the South of France the Flowers are larger than in our Fields; and have uſually the outer range of Florets of a different colour from thoſe within: In our Gardens, it grows to the ſame ſtate and with great variety.

THERE is ſcarce any vegetable ſubſtance in which the Colour is ſo fixed and permanent as in our Corn Blue-Bottle. It may probably afford a good dye.

GENUS II.

SCURF-WORT.

PSORA.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup grow membranaceous at the top, and their Hairs are conſiderably long and hard.

Plate 27. *o a b.*

1. BRANCHY SCURF-WORT.

Plate 27. Fig. 1.

Character of the Species. Centaurea Orientalis.

The Leaves are doubly pinnatifid.

Fig. 1. *a.*

THIS is a Perennial, native of the Greek Iſlands, and found alſo in Siberia. It flowers in July and Auguſt. The Leaves are of a ſtrong dark green: the Stalk riſes to two Foot and a half high, and is very branchy. The Flowers are of a pale yellow.

I imagine this Plant to be the Pſora of Aetius; he might naturally enough be acquainted with it; and I have tried its virtues againſt cutaneous eruptions this year, not without ſome ſucceſs.

2. SIMPLE SCURF-WORT.

Plate 27. Fig. 2.

Character of the Species. Centaurea Stœbe.

The Leaves are linear, and ſimply pinnatifid.

Fig. 2. *a b.*

THIS is a Biennial, native of Germany, and flowers in Auguſt; an upright but very inconſiderable Plant. The Leaves are of a ſomewhat blueiſh green. The Flowers are crimſon.

3. HUMBLE SCURF-WORT.

Plate 27. Fig. 3.

Character of the Species. Centaurea Acaulis.

The Leaves are harped, and the Flower reſts almoſt upon the ground.

Fig. 3. *a b.*

THIS is a Biennial, native of Arabia, and flowers in June. The Leaves are ragged and of a blueiſh green. The Stalk is ſcarce an Inch high, ſo that the Flower ſeems to reſt upon the ground without any. It is large, and of a delicate yellow.

SCURFWORT.

Branchy Scurffwort.

Generic Character.

Simple Scurffwort.

Humble Scurffwort.

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CRESTWORT.

Generic Character.

Harp-leav'd Crestwort.

Various-leav'd Crestwort.

Pinnatifid Crestwort.

GENUS III.

CREST-WORT.

COLYMBADA.

CENTAUREA LINNÆI.

Character of the Genus.

The Hairs of the Scales ſtand diſtant, are ſharp, and riſe upon them in manner of the briſtly creſt of the ancient helmets.

Plate 28. *a a b.*

1. VARIOUS LEAVED CREST-WORT.

Plate 28. Fig. 1.

Character of the Species. Centaurea Centauroides.

The bottom Leaves are lanced, the upper ones are pinnatifid with a broad end.

Fig. 1. *a b.*

THIS is an Annual, native of Spain and Italy, a troubleſome Plant among corn and in the vineyards; flowering in July. It grows to two Foot high. The Leaves are of a ſtrong but not pleaſant green; the Flowers are of a perfect gold-yellow; and the hard Hairs which form the Creſt upon the Scales of the Cup have ſomething of that colour.

2. HARP-LEAVED CREST-WORT.

Plate 28. Fig. 2.

Character of the Species. Centaurea Sicula.

The Leaves are harped, and have only a few large Segments.

Fig. 2. *a.*

This is a Perennial, native of Sicily, and flowers in June. The Leaves are of a whitiſh green and ſoft to the touch. The Stalk grows to near a Yard in heighth; the Flowers are beautifully yellow, and the Hairs which creſt the Scales of the Cup are ſo hard, they prick the hands.

3. PINNATIFID CREST-WORT.

Plate 28. Fig. 3.

Character of the Species. Centaurea Collina.

The Leaves are pinnatifid, and the Segments are cut in again.

Fig. 3. *a b.*

THIS is a Biennial, native of Spain and Italy, a tall and upright Plant, flowering in September. The Leaves are of a duſky green; the Stalk is two Foot and a half high, and has ſcarce any Branches. The Flowers are of a dull yellow.

GENUS IV.

KNAPWEED.

JACEA.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup are oblong, and have long weak Hairs towards their top.

Plate 29. *a a b.*

1. LANCED KNAPWEED.

Plate 29. Fig. 1.

COMMON KNAPWEED.

Character of the Species. Centaurea Nigra.

The Leaves are ſeſſile, lanced, and irregularly dented.

Fig. 1. *a b.*

This is a Perennial, common in our dry paſtures, and flowers in July. The Leaves are of a ſtrong green; they are very uncertainly divided at the edge, ſome deeply and ſome not at all on the ſame Plant. The Stalk is two Foot and a half high, of a duſky colour and firm ſubſtance. The Flowers are crimſon, and the tips of the Scales of their Cups are of a deep duſky purple.

1. LEAFY-HEADED KNAPWEED.

Plate 29. Fig. 2.

Character of the Species. Centaurea Pullata.

The Cup is ſurrounded with a leafy Circlet at its Baſe.

Fig. 2. *a.*—

THIS is an Annual, native of Spain and of the South of France, a very diminutive Plant, flowering in Auguſt. The Leaves are of a duſky and unpleaſant green. The Stalk ſeldom riſes to more than two or three Inches high; the Flower is white; the Hairs of the Cup are black.

3. SERRATED LEAVED KNAPWEED.

Plate 29. Fig. 3.

Character of the Species. Centaurea Seſſiliflora.

The Leaves are lanced and ſharply ſerrated, and they have Footſtalks.

Fig. 3. *a b.*

THIS is a Biennial, native of France, and alſo of Sicily, and flowers in Auguſt. The Leaves are of a very ſtrong green; the Stalk is purpliſh. The Flowers are crimſon, and the Tops and Hairs of the Cups are of the ſame colour, but duller.

KNAPWEED.

Generic Character.

Lanc'd. Knapweed.

Leafy-headed Knapweed.

Serrated Knapweed.

WHITE-HEAD.

Generic Character.

Ragged White-head.

Pinnatifid White-head.

Thorny White-head.

ORDER III.

With the Scales of the Cup ſerrated, and haired at the point and ſides.

GENUS I.

WHITEHEAD.

STÆBE.

CENTAUREA LINNÆI.

Character of the Genus.

The Cups are oval, and the Hairs upon the Scales are ſoft.

Plate 30. *a a b.*

1. PINNATIFID WHITEHEAD.

Plate 30. Fig. 1.

Character of the Species.

Centaurea Paniculata.

The Leaves are pinnatifid with a few plain lanced ſegments.

Fig. 1. *a b.*

THIS is an Annual, native of France and Germany, and common to many other parts of the world; a Plant of two Foot and a half high, flowering in Auguſt. The Leaves are of a pale but delicate green; the Flowers are of a very fine crimſon; the Cups are whitiſh, but not gloſſy.

2. RAGGED WHITEHEAD.

Plate 30. Fig. 2.

Character of the Species.

Centaurea Diſſecta.

The Leaves are broad, lanced, and cut ſo deeply and irregularly, that they looked ragged at the edge.

Fig. 2. *a b.*

THIS is a Biennial, native of Germany, and flowers in July. The Leaves are of a perfectly fine and bright green; the Stalk is firm and tinged with brown; the Cups are of a whitiſh green, and the Flowers of a very ſtrong crimſon.

3. THORNY WHITEHEAD.

Plate 30. Fig. 3.

Character of the Species.

Centaurea Spinoſa.

The Leaves are harped; the Branches terminate in hard Thorns.

THIS is a Biennial, native of Crete, and flowers in June. It is a low but very ſingular Plant. The Leaves are of a pale green; the Stalks are whitiſh, and the Thorns in which they terminate are brown or rediſh. The Cups are white, and the Flowers of a pale but very delicate crimſon.

4. WOOLLY WHITEHEAD.

Plate 31. Fig. 1.

Character of the Species. Centaurea Raguſina.

The Leaves are pinnatifid, and their Lobes are rounded at the end.

Fig. 1. *a b.*

THIS is a Perennial, native of Crete, and other parts of the Eaſt, a very elegant and ſingular Plant; the whole of it being as white as wool, only the Flower gold-yellow. It is a tall and buſhy Plant; the Stalks are hard, but downy on the ſurface; and the Leaves are ſoft and velvety to the touch. It flowers in Auguſt.

5. ELEGANT WHITEHEAD.

Plate 31. Fig. 2.

Character of the Species. Centaurea Cineraria.

The Leaves are doubly pinnatifid, and their Segments ſharp-pointed.

Fig. 2. *a b.*

THIS is a Perennial, native of Italy, and flowers in July; a very elegant and beautiful Plant. The Stem is two Foot and a half high, whitiſh, thick and branchy. The Leaves are of a duſky or greyiſh white. The Flowers are of a beautiful crimſon.

6. WEDGE-LEAVED WHITEHEAD.

Plate 31. Fig. 3.

Character of the Species. Centaurea Argentea.

The Leaves are wedge-ſhaped; and indented along the ſides, and at the end.

THIS is a Perennial, native of Crete, and flowers in July and Auguſt. The Leaves are ſingular, not only in their form but colour; they are ſoft to the touch, and play about with great elegance and eaſe, and their colour is a pure cottony white. The little clumps of them ſcattered among the ſands before the Stalk riſes, give a very ſingular appearance to many barren ſpots of that dry country. The Stalk is two Foot or more in heighth; the Flowers are ſmall and yellow. Their Cups in this as in the two preceding Species, are of a pure and perfect white.

WHITE-HEAD.

2

Woolly White-head.

Elegant White-head.

Wedge-leav'd White-head.

HARSH-WEED.

Generic Character.

Vol. 4
Various leav'd Harsh-weed?

Lanc'd
Harsh-weed.

Doubly pinnatifi'd Harsh-weed?

GENUS II.

HARSH-WEED.

SAGMEN.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup have their points, and the tops of all the indentings, crowned with long ſtiff and almoſt prickly Hairs.

Plate 32. *o a b.*

1. VARIOUS LEAVED HARSH-WEED.

Plate 32. Fig. 1.

Centaurea Sibirica.

Character of the Species.

The radical Leaves are ſome of them lanced and ſimple, and others pinnatifid; thoſe on the Stalk are all ſimple and lanced.

Fig. 1. *a b.*

THIS is a Perennial, native of Siberia, a weak and low Plant, flowering late in Auguſt; but very conſpicuous for its large and glowing Flower, which has more the aſpect of one raiſed by garden culture, than a native of the bleak mountains of Siberia. The Leaves are of a whitiſh green and woolly; the Stalk is a Foot high, but weak; the Flower is of a glowing crimſon.

2. LANCED HARSH-WEED.

Plate 32. Fig. 2.

Centaurea Sempervirens.

Character of the Species.

The Leaves are lanced and waved, and dented at the edges.

Fig. 2. *a b.*

THIS is a Perennial, native of Italy, Spain, and Portugal, and flowers in July. The Leaves are of a very ſtrong and deep green, and of a firm ſubſtance; the Stalk is two Foot and a half high, full of Leaves, and very much branched: the Flowers are numerous, and of a bright and fine crimſon. This appears to have been an herb of ſacred eſtimation among the old Romans, and to have made a very material part of the furniture and ornament of their altars.

4. DOUBLY PINNATIFID HARSH-WEED.

Plate 32. Fig. 3.

GREAT KNAPWEED.
Centaurea Scabioſa.

Character of the Species.

The Leaves are doubly pinnatifid, and their Segments ſharp-pointed.

Fig. 3. *a b.*

THIS is a Biennial, native of our dry paſtures, a very handſome Plant, flowering in July. The Leaves are of a ſtrong green; the Stalk is two Foot high, and very much branched. The Flowers are crimſon.

ORDER IV.

With the Scales of the Cup pinnatifid, or cut deep in the manner of a pinnatifid Leaf, with Hairs at the points.

GENUS I.

WIRE-WEED.

CISTRUM.

CENTAUREA LINNÆI.

Character of the Genus.

The Hairs of the Cup are ſlender, and tough like Wires.

Plate 33. *a a b.*

WAVY WIRE-WEED.

Plate 33. Fig. 1.

Character of the Species. Centaurea Iſnardi.

The Leaves are deeply waved, and have a broad indented end.

Fig. 1. *a b.*

THIS is a Perennial, native of Spain and Portugal, and flowers in July. The Leaves are of a duſky green; the Stalk is two Foot high, but weak and hairy; the Flowers are of a delicate crimſon, and the Hairs of the Cup, which are very conſpicuous, are of a yellowiſh brown.

2. WELTED WIRE-WEED.

Plate 33. Fig. 2.

Character of the Species. Centaurea Napifolia.

The Leaves are harped and decurrent, ſo that the Stalk is welted.

Fig. 2. *a b.*

THIS is a Biennial, native of Crete, and flowers in June; a ſingular but unhandſome Plant, remarkable for a ſtiff and aukward diſpoſition of its Branches. The Leaves are of a freſh and fine green. The Stalk divides into many branches, and the Flowers are of a high and fine crimſon.

3. HARSH WIRE-WEED.

Plate 33. Fig. 3.

Character of the Species. Centaurea Aſpera.

The Leaves are ſimple, lanced, and deeply dented.

Fig. 3. *a.*

THIS is a Biennial, native of Italy and the South of France, and flowers early in Autumn. The Leaves are of a deep unpleaſant green, covered with harſh brown hairs. The Stalk is a Foot and a half high, weak and branchy; and the Flowers are crimſon.

WIRE-WEED.

Wavy Wire-weed.

Vol. 4 Harsh Wire-weed.

Generic Character.

Welted Wire-weed.

PLUMEWORT.

Generic Character.

Red-stalk'd Plumewort.

Jagg'd Plumewort.

ORDER V.

With the Scales of the Cup feathery; or divided into a number of plumoſe, hairy Parts.

GENUS I.

PLUMEWORT.

HERACLEA.

CENTAUREA LINNÆI.

Character of the Genus.

The Scales of the Cup are elliptic, and convex on the Surface.

Plate 34. *o a b.*

1. RED STALKED PLUMEWORT.

Plate 34. Fig. 1.

Character of the Species. Centaurea Phrygia.

The Leaves are lanced, indented and ſeſſile.

Fig. 1. *o a b.*

THIS is a Perennial, native of Italy, Germany, and Switzerland, a Plant of two Foot and a half high, crowned with Flowers in Auguſt. The Leaves are of a whitiſh green, ſoft to the touch, and downy; the Stalk is woody, rib'd and red. It is very troubleſome to the Reapers among their Corn, and has been a hated Plant for that cauſe from very early time. The Flowers are large, and of a good crimſon. Their Cups, from the quantity of feathery Hairs, make a very ſingular appearance.

2. JAGGED PLUMEWORT.

Plate 34. Fig. 2.

Character of the Species. Centaurea Capillata.

The Leaves are irregularly cut into many obtuſe ſegments.

Fig. 2. *a b.*

THIS is a Biennial, native of Siberia, and flowers in July. The Plant is two Foot high, and very erect and firm. The Leaves are of a faint green; the Stalk is coarſe, tough, and rib'd. The Flowers are crimſon; and the Hairs of their Cups are black.

ORDER IV.

With the Scales of the Cup terminated by palmated or fingered Hairs.

GENUS I.

PALM-WEED.

PYCNOCOMUS.

CENTAUREA LINNÆI.

The Scales of the Cup are egg-ſhaped, and their fingered Hairs riſe only from the point.

Plate 35. *a b.*

1. LANCED PALM-WEED.

Plate 35. Fig. 1.

Character of the Species. Centaurea Sonchifolia.

The Leaves are lanced; and cut deeply but ſimply at the edge.

Fig. 1. *a b.*

THIS is an Annual, native of the Levant Iſlands, and of Sicily, a tall and not unhandſome Plant, flowering in Auguſt. The Stalk is erect but tender, welted and green. The Leaves are of a very bright green. The Flowers of a deep crimſon.

2. HARPED PALM-WEED.

Plate 35. Fig. 2.

Character of the Species. Centaurea Seridis.

The Leaves are harped with a few ſegments, and there is a circlet under the Flower.

Fig. 2. *a b.*

THIS is a Biennial, native of Spain, a very beautiful Plant, flowering in Auguſt and September. The Leaves are of a pale green, and rough. The Stalk is weak, reddiſh, and about a Foot high. The Flowers are of a pale crimſon, and their cups are very beautiful, having a ruddy glow, and the Hairs erect.

3. PINNATIFID PALM-WEED.

Plate 35. Fig. 3.

Character of the Species. Centaurea Romana.

The Leaves are pinnatifid, with large indented ſegments.

Fig. 3. *a b.*

THIS is an Annual, native of Italy, a large Plant a Yard in height, with many branches, flowering in July. The Leaves are of a ſomewhat blueiſh green; the Flowers are crimſon. Their Cups are of the ſame green with the Leaves, but the Hairs of them are reddiſh.

PALM-WEED.

Generic Character.

Lancéd Palm weed.

Harpid Palm-weed.

Pinnatifid Palm-weed.

ARTICHOKE.

Generic Character.

2

Wither'd Artichoke.

Fleshy Artichoke.

3

1

Prickly Artichoke.

FAMILY III.

With original and naked Scales.

ORDER I.

With the Scales of the Cup ſimple, or naked and undivided.

GENUS I.

ARTICHOKE.

CYNARA.

Character of the Genus.

The Scales of the Cup are oval; and have a thick fleſhy Baſe.

Plate 36. *o a b.*

1. PRICKLY ARTICHOKE.

Plate 36. Fig. 1.

THE ARTICHOKE THISTLE.

Character of the Species. Cynara Humilis.

The tops of the Leaves and points of the Scales in the Cup are hard and thorny.

Fig. 1. *a b.*

THIS is a Perennial, native of the coaſts of Spain and Africa, a low but very conſpicuous Plant, flowering in June. The Stalk is half a Yard high, of a whitiſh green, rib'd, and ſomewhat downy. The Leaves are of a pale green on the upper ſide, and downy underneath. The Cup is pale green, and the Flower is blue.

2. WITHERED ARTICHOKE.

Plate 36. Fig. 2.

THE CHARDOON.

Character of the Species. Cynara Cardunculus.

The tops of the Leaves and points of the Scales of the Cup are dry, withered, and membranaceous.

Fig. 2. *a b.*

THIS is a Perennial, native of the coaſt of Africa and of Crete, and other of the Greek Iſlands, a Plant of great ſtature, flowering in Auguſt. The Leaves are vaſt and of a greyiſh green; the Stalk is eight Foot high. The Flowers are blue. The Cup is bigger than a gooſe-egg, and its Scales are ſpotted with red.

'Tis to be doubted, whether this has not riſen firſt from the ſeeds of the former, and the ſucceeding from the ſeeds of this. Here the ſtature is increaſed, and the thorns fade; this may ariſe from a rich ſoil wild; for we know how eaſily it reſults from culture.

3. FLESHY ARTICHOKE.

Plate 36. Fig. 3.

COMMON ARTICHOKE.

Character of the Species. Cynara Scolymus.

The Tops of the Leaves are naked, and the Points of the Scales of the Cup are ſplit.

Fig. 3. *a b.*

THIS is our Garden Artichoke, but it is a wild Plant in leſs perfection in the Fields of Sicily; It is a Perennial, a Yard in height, and flowers in Auguſt. The Leaves are of a whitiſh green: the Stalk is rib'd and ſtrong; the Head is vaſt and fleſhy, and the Flowers are blue.

GENUS II.

SAW-WORT.

SERRATULA.

Character of the Genus.

The Scales are oval, thin, and membranaceous throughout.

1. VARIOUS LEAVED SAW-WORT.

Plate 37. Fig. 1.

Common Saw-wort.
Serratula Tinctoria.

Character of the Species.

The Leaves are ſome ſimple, others harped with a vaſt end, but all delicately ſerrated on the edge.

Fig. 1. *a b.*

THIS is a Perennial, native of our thickets and waſte grounds, and flowers in June; a very elegant Plant. The Stalk is ſlender, upright, firm, and near a Yard high. The Leaves are of a very fine green; the Flowers are crimſon: the Cups alſo have a tincture of the ſame colour.

2. LINEAR-LEAVED SAW-WORT.

Plate 37. Fig. 2.

Character of the Species.

Serratula Spicata.

The Leaves are linear, and the Flowers are placed in a long ſimple ſpike.

Fig. 2. *a b.*

THIS is a Perennial, native of North America, and flowers in July; a tall, ſtately, and very ſingular Plant. The Leaves are of a dull green; the Stalk is red, thick, and a Yard or more in height. The Flowers are crimſon.

3. GRASSY SAW-WORT.

Plate 37. Fig. 3.

Character of the Species.

Serratula Chamepeuce.

The Leaves are graſſy and ſtand cluſtered, and bend down.

Fig. 3. *a b.*

THIS is a Biennial, native of Crete, a very ſingular Plant, full of Leaves, and flowering in Auguſt. The Stalk is pale and woody; the Leaves are of a ſomewhat blueiſh green: the Flowers are crimſon.

GENUS

Page 40.

SAW-WORT.

Pl. 37.

Generic Character.

Various leav'd Saw-wort.

Linear Saw-wort.

Grassy Saw-wort.

Vol. 4

BEN.

Generic Character.

Harp-leav'd Ben.

Lanc'd Ben?

Pinnatifi'd Ben.

Woody Ben?

GENUS III.

BEN.

BEHEN.

CENTAUREA LINNÆI.

SERRATULA LINNÆI.

Character of the Genus.

The Scales of the Cup are thin, dry, chaffy, and obtuſe.

Plate 38. *o a b.*

1. HARP-LEAVED BEN.

Plate 38. Fig. 1.

Character of the Species. Centaurea Behen.

The lower Leaves are harped, the upper ones embrace the Stalk.

Fig. 1. *a b.*

THIS is a Perennial, native of Mount Libanus, and other parts of Aſia Minor, and flowers in June. The Leaves are of a ſtrong browniſh green. The Stalk is uſually alſo brown, it grows to two Foot high, and is firm and high rib'd. The Flowers are yellow, and their Cups having ſomething of the brownneſs of the Stalk, ſerve as a happy foil to them.

2. LANCED BEN.

Plate 38. Fig. 2.

Character of the Species. Centaurea Jacea.

The Leaves are lanced; the lower ones are deeply indented, the others plain.

Fig. 2. *a b.*

THIS is a Perennial, native of Germany, and moſt of the northern parts of Europe; a Plant of two Foot or more in height, flowering in Auguſt. The Leaves are of a ſtrong and dark green; the Stalks are tough and of a reddiſh brown; the Flowers are crimſon.

3. PINNATIFID BEN.

Plate 38. Fig. 3.

Character of the Species. Centaurea Alba.

The Leaves are linear, and dented ſo deep as to appear pinnatifid.

Fig. 3. *a b.*

THIS is a Biennial, native of Spain, and flowers in July. The Stalk is reddiſh, tough, branchy, and near a Yard high. The Leaves are of a pale whitiſh green. The Flowers are white, and the heads alſo are white and gloſſy.

4. WOODY BEN.

Plate 38. Fig. 4.

Character of the Species. Centaurea Fruticoſa.

The Stem is woody: the Leaves are lanced and obtuſe.

Fig. 4. *a b.*

THIS is a Perennial, native of Spain, and flowers in July. The Stem is brown, but the young Branches are pale: The Leaves are of a light gloſſy green. The Flowers are pale crimſon.

5. SUBLINEAR BEN.

Plate 39. Fig. 1.

Character of the Species. Serratula Salicifolia.

The Leaves are ſeſſile, long, and narrow, but they ſwell a little in the middle.

Fig. 1. *a b.*

THIS is a Biennial, native of Siberia, a handſome Plant, flowering in July and Auguſt. The Stalk is two Foot high and pale: The Leaves are of a bright green on the upper ſide, but white and downy underneath. The Flowers are of a pale, but not unelegant crimſon.

6. CLUSTERY BEN.

Plate 39. Fig. 2.

Character of the Species. Serratula Multiflora.

The Flowers ſtand in thick Cluſters, and the Leaves are lanced.

Fig. 2. *a b.*

THIS is a Perennial, native of Siberia, and flowers in July. The Stalk is reddiſh, and near a Yard high: The Leaves are of a ſtrong green on the upper ſide, and white underneath. The Flowers are ſmall and crimſon.

7. DROOPING-LEAVED BEN.

Plate 39. Fig. 3.

Character of the Species. Serratula Noveboracenſis.

The Leaves are lanced, ſerrated, and hang drooping.

Fig. 3. *a b.*

THIS is a Perennial, native of North America, and flowers in September. The Stalk is green, rib'd, and ſix Foot high. The Leaves are ſoft to the touch, and of a pale but pleaſant green. The Flowers are crimſon.

8. WELTED BEN.

Plate 39. Fig. 4.

Character of the Species. Serratula Babylonica.

The lower Leaves are harped, the upper ones are indented and decurrent.

Fig. 4. *a b.*

THIS is a Perennial, native of the Eaſt, and flowers in June. The Stalk is pale; the Leaves are downy, and of a whitiſh green. The Flowers are crimſon.

9. TOWERING

BEN.

Sublinear Ben.

Clustery Ben.

Drooping-leav'd Ben.

Welted Ben.

BEN.

3

Towering Ben.

Bluegreen Ben?

Ragged Ben.

Rough Edg'd Ben.

9. TOWERING BEN.

Plate 40. Fig. 1.

Character of the Species. Serratula Prælta.

The Leaves are lanced and long, deeply cut like a ſaw at the edges, and downy underneath: they ſtand horizontally.

Fig. 1. *a b c.*

THIS is a Perennial, native of North America, a Plant of five Foot high or more, flowering late in September. The Stalk is red; the Leaves are of a freſh and fine green, but white on the under ſide: The flowers are red.

10. BLUE-GREEN BEN.

Plate 40. Fig. 2.

Character of the Species. Serratula Glauca.

The Leaves are oval, and the Flowers ſtand in cluſters.

Fig. 2. *a b.*

THIS is a Perennial, native of Virginia and Carolina, a low Plant, flowering in Auguſt. The Stalk is tender and two Foot high: The Leaves are of a ſea-green colour, and edged with Hairs: The Flowers are crimſon.

11. RAGGED BEN.

Plate 40. Fig. 3.

Character of the Species. Serratula Centauroides.

The Leaves are ragged, pinnatifid with ſharp Segments, and ſmooth.

Fig. 3. *a b.*

THIS is a Perennial, native of Siberia, and flowers in July. The Stalk ſeldom riſes to more than a Foot in height, and has ſeveral branches. The Leaves are of a coarſe green: The Flowers are purple.

12. ROUGH-EDGED BEN.

Plate 40. Fig. 4.

Character of the Species. Serratula Amara.

The Leaves are lanced, and have a rugged Edge.

Fig. 4. *a.*

THIS alſo is a native of Siberia, a Perennial of a Foot and half high. The Stalk is ſlender, but tough and reddiſh. The Leaves are of a duſky green. The Flowers are of a bright crimſon.

GENUS IV.

CENTAURY.

CENTAUREA.

Character of the Genus.

The Scales of the Cup are oblong, convex toward the baſe, dry, thin, and flatted toward the top; and thin along the edge.

Plate 41. *a a b c d.*

1. DELICATE CENTAURY.

Plate 41. Fig. 1.

Character of the Species. Centaurea Crupina.

The Leaves are winged and ſerrated; the Cups are oblong and ſlender.

Fig. 1. *a b.*

THIS is an Annual, native of Italy and the South of France, a tall, erect, and truly delicate Plant. The Stalk is pale; the Leaves are of a dark but not unpleaſant green, paler as they run higher up the Stalk, and more delicately divided. The Plant is a Yard high; the Flowers are of a delicate crimſon, and the Cups have a tinge alſo of the ſame colour. Even the Seeds are beautiful, they reſemble Shuttle-cocks.

2. MUSKY CENTAURY.

Plate 41. Fig. 2.

SWEET SULTAN.

Character of the Species. Centaurea Moſchata.

The Leaves are waved; the Cups are oval and ſwoln.

Fig. 2. *a b.*

THIS is an Annual, native of Perſia and ſome part of Tartary, a beautiful Plant, diſtinguiſhed by a perfumed ſmell in the Flower, and for that reaſon long ſince received into the gardens of the Eaſt, as well as of this part of the world. The Stalk is two Foot and a half high, firm, and divided into many branches: The Leaves are of a dark green, and the Flowers are crimſon in all degrees fading even into white. It flowers in Auguſt. The outer range of Florets are uſually large, the inner ſmall; but it varies ſo as to have all large, and in colour becomes yellow.

3. LIGHT DENTED CENTAURY.

Plate 41. Fig. 3.

Character of the Species. Centaurea Erucifolia.

The Leaves are lanced, lightly dented, and woolly.

Fig. 3. *a b.*

THIS is a Perennial, native of Italy, and flowers in Auguſt. The Leaves are whitiſh and downy; the Stalk is two Foot high; the Flowers are crimſon.

CENTAURY.

Generic Character.

Delicate Centaury.

Musky Centaury.

Light-dented Centaury.

CENTAURY.

2

1

Pinnatifid
Centaury.

2 a b

Various-leav'd
Centaury.

3

Wing'd
Centaury.

4. PINNATIFID CENTAURY.

Plate 42. Fig. 1.

Character of the Species. Centaurea Lippii.

The Leaves are pinnatifid, with ſlight broad obtuſe Segments.

Fig. 1. *a b*.

THIS is an Annual, native of Egypt, a Plant of two Foot, flowering in July and Auguſt. The Stalk is tinged lightly with brown; the Leaves are of a ſtrong but ſomewhat blueiſh green; the Flowers are crimſon, and their Cups are uſually of an unſtained green.

5. VARIOUS LEAVED CENTAURY.

Plate 42. Fig. 2.

Character of the Species. Centaurea Alpina.

The Leaves are lanced and toothed at the Baſe, the upper are pinnatifid with narrow undivided Segments, but a dented top.

Fig. 2. *a b c*.

THIS is a Biennial, native of Italy and Germany, and flowers in Auguſt. The Stalk is ſlender, green, and half a Yard high. The Leaves are of a delicate but ſomewhat yellowiſh green. The Flowers are large and of a bright yellow.

6. WINGED CENTAURY.

Plate 42. Fig. 3.

COMMON GREAT CENTAURY.
Centaurea Centaurea.

Character of the Species.

The Leaves are winged and ſerrated, with a ſerrated Film along the Rib.

Fig. 3. *a b*.

THIS is a Perennial, native of Germany, the Alps, and Pyrenees, and flowers in Auguſt: It has been long kept in our gardens, and celebrated for its virtues more than it deſerves. Be careful of an error: this is not the Centaury uſed as a ſtomachic; that is diſtinguiſhed by the name of *Leſſer*, and is altogether a different Plant. This has been conſidered as an aſtringent, and is ſuch, but of ſlight efficacy; at leaſt in England. It is a Yard high; the Stalk is browniſh. The Leaves are of a deep ſtrong green; the Flowers are red.

7. BRIGHT-HEADED CENTAURY.

Plate 43. Fig. 1.

Character of the Species. Centaurea Splendens.

The lower Leaves are doubly pinnatifid, the upper ones ſimply pinnatifid, but with indented Segments.

Fig. 1. *a b.*

THIS is a Biennial, native of Spain and Switzerland, and alſo of Siberia, and flowers in July. The Stalk is pale green, rough, with a few ſhort hard Hairs, and more than two Foot high, with many Branches. The Leaves are of a pale but pleaſing green, and the Flowers are crimſon: The Scales of the Cup have a bright ſilvery gloſs.

8. SIMPLE LEAVED CENTAURY.

Plate 43. Fig. 2.

Character of the Species. Centaurea Glaſtifolia.

The Leaves are lanced, perfectly undivided and decurrent.

Fig. 2. *a b.*

THIS is a Perennial, native of Siberia, and particularly of the lower hills, it flowers in Auguſt. The Stalk is firm, upright, welted, of a ſtrong green, and near a Yard in height. The Leaves are of a ſtrong but coarſe green. The Flowers are of a delicate yellow.

9. PAINTED CENTAURY.

Plate 43. Fig. 3.

Character of the Species. Centaurea Conifera.

The lower Leaves are lanced, the upper pinnatifid, and the Stalk is ſimple.

Fig. 3. *a b c.*

THIS is a Perennial, an elegant but low Plant, common about Montpelier, and alſo in the dryeſt grounds of Spain; flowering in Auguſt. The Leaves are of a whitiſh green and woolly. The Stalk ſeldom riſes to more than ſeven Inches high, often much leſs; the Flower is crimſon; the Cup is large and white, only the Tips of all the Scales are tinged with crimſon.

CENTAURY.

3

Bright-headed Centaury.

Simple-leav'd Centaury.

Painted Centaury.

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WOOLLWEED

Generic Character.

Wavy Woollweed?

RHAPONTIC

Pl. 44

Generic Character.

Egg-leav'd Rhapontick?

Vol. 4

ORDER II.

With the Scales of the Cup naked, but notched or ſerrated along the edge.

GENUS I.

RHAPONTICK.

RHAPONTICA.

CENTAUREA LINNÆI.

Character of the Genus.

The Cup is elliptic, and its Scales are large.

OF this Genus we know only one ſpecies.

Plate 44. *a o b.*

1. EGG-LEAVED RHAPONTICK.

Plate 44. Fig. 1.

Character of the Species. Centaurea Rhapontica.

The Leaves are egg-ſhaped, indented, and placed on Footſtalks.

Fig. 1. *a b c.*

THIS is a Perennial, native of Switzerland and Italy, found principally on the mountains, and flowering in July, or earlier. The Leaves are of a freſh green on the upper ſide, but woolly underneath; the Stalk is ſeldom more than a Foot high; the Flower is large and crimſon. This is not the Plant whoſe Root is the Rhapontick of the ſhops; that is a true and genuine kind of Rhubarb.

ORDER III.

With the Scales of the Cup naked, but winged or cut into deep and ſimple Diviſions.

GENUS I.

WOOL-WEED.

ERIOPHA.

CENTAUREA LINNÆI.

Character of the Genus.

The Cup is egg-ſhaped, and its Scales are hard.

Plate 44. *o a b.*

OF this Genus alſo we know only one Species.

1. WAVY WOOL-WEED.

Plate 44. Fig. 2.

Character of the Species. Centaurea Eriophora.

The Leaves are oblong and waved, and thoſe loweſt down are dented.

THIS is an Annual, native of Portugal, a very ſingular and beautiful Plant, flowering in July. The Stalk is whitiſh, welted, and more than half a Yard high; the Leaves are ſoft and of a whitiſh green; the Flowers are yellow; and their Cups are white and woolly.

ORDER

ORDER IV.

With the Scales of the Cup naked but fingered; or cut into deep Diviſions like Fingers of a hand.

GENUS I.

BULL-WEED.

SPHÆROCEPHALA.

Character of the Genus.

The Cup is oval, and its Scales ſtand looſe.

Plate 45. *o a b.*

Of this Genus we only know one Species.

1. ROUGH BULL-WEED.

Plate 45. Fig. 1.

Character of the Species. Centaurea Sphærocephala.

The Leaves are dented, rough at the edge, and embrace the Stalk.

Plate 45. *a b.*

THIS is a Biennial, native of Africa, and frequent as our Thiſtles about Tangier, covering the burnt Sands with its crimſon Flowers all the months of June, July, and Auguſt. The Stalk is weak, branched, and about a Foot high naturally, but the weight of the Flowers and its own tenderneſs, make it uſually lie almoſt on the ground. The Leaves are numerous and of a blueiſh green: The Flowers are very large and beautiful, they ſpread out every way ſo as to form a kind of globular Head; and their Colour is a ſtrong ſcarlet, but little tending to crimſon. Sometimes they are abſolutely white, but it is when the Plant is ſickly.

BULL-WEED.

Generic Character.

Rough Bull-weed.

TORNWEED.

Vol. 4

ORDER V.

With the Scales of the Cup torn as it were into irregular Segments at the end.

GENUS I.

TORN-WEED.

LACINARIA.

SERRATULA LINNÆI.

Character of the Genus.

The Cups are elliptick, and their Scales are chaffy.

Plate 16. *a a b.*

1. SESSILE-HEADED TORN-WEED.

Plate 46. Fig. 1.

Character of the Species. Serratula Squarrosa.

The Cups ſtand in the Boſom of the Leaves without Footſtalks, and the Stalk is welted.

Fig. 1. *a b.*

THIS is a Perennial, native of Virginia, a low but very ſingular Plant, flowering in September. The Root is tuberous, the Stalk is thick, red, welted, and about a Foot and half high; the Leaves are of a bright green, and a little downy. The Flowers are crimſon, and their Cups are brown. In bad grounds the Flowers will be whitiſh and their Cups ſmall; but this is accidental.

2. FOOTSTALKED TORN-WEED.

Plate 46. Fig. 2.

Character of the Species. Serratula Scarioſa.

The Flowers have Footſtalks, and the Stalk is plain.

Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, and flowers in September. The Stalk is of a browniſh red, and two Foot high; the Leaves are of a bright and gloſſy green; the Flowers are crimſon; and their Cups are green tinged lightly with brown: They ſtand on leafy Footſtalks. The Root is tuberous as in the other.

The END of the FOURTH VOLUME.

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FOURTH VOLUME.

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THE

VEGETABLE SYSTEM.

OR,

The INTERNAL STRUCTURE

AND

The LIFE of PLANTS;

Their PARTS, and NOURISHMENT, Explained;

THEIR

CLASSES, ORDERS, GENERA, and SPECIES,

Aſcertained, and Deſcribed;

In a METHOD altogether NEW:

COMPREHENDING

AN ARTIFICIAL INDEX,

AND

A NATURAL SYSTEM.

With FIGURES of all the PLANTS; Deſigned and Engraved by the AUTHOR.

The Whole from NATURE only.

By JOHN HILL, M. D.

VOL. V.

Containing the entire CLASS of AGGREGATE or CLUSTER-HEADED PLANTS:

With Obſervations on a natural Method, ſo far as it regards the Connection of the Claſſes; on the Production and Propagation of MULISH or INTERMEDIATE PLANTS; and on certain PLANTS which are common to England and America.

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M.DCC.LXXII.

HERBS,

WITH

Many FLOWERS assembled in a COMMON CUP,

SERIES the SECOND;

Having the CHIVES distinct.

CLASS the SECOND,

AGGREGATES.

CHARACTER of the CLASS.

PLANTS with many perfect FLOWERS, forming a Head or Ball; surrounded by a common CUP; each FLOWER having also its own distinct CUP, and simple FOOTSTALK.

CHAP. I.

Of the Place of AGGREGATE PLANTS in an artificial, and a natural Method.

IT will be necessary to explain very distinctly the marks of this Class; and the construction of that head, or ball of Flowers, which constitutes its character: not only to establish with certainty its proper form; but to distinguish it precisely from the four Classes with assembled Florets which have gone before, and that of the umbrella'd or umbelliferous Plants, which follows. Those four agree in one great character, of having many Florets collected together to form one Flower: The umbelliferous Class is distinguished from them, by having each Flower, though little, perfect and entire, and placed alone upon its separate Footstalk.

IT would seem as if these last had no connection with, or relation to the former; but thus far the natural and artificial methods agree, for these Classes in both (with the intervention of this) properly follow one another; and nature never loses the progression.

IT is true there is no immediate connection between the four Classes of Plants, whose general Flower is composed of many assembled Florets, and the Class of umbelliferous or umbrella'd Plants; but this is placed between them: This gives that connection which they want with one another, and with this, they regularly constitute six succeeding arrangements of Plants; each truly separate in its character, yet all united by their plain relation.

THIS is not a place for entering at large upon the course of nature in the Vegetable chain; that will be shewn when we shall come to the detail of Plants in a natural method; in which

there will be no diſtinction of Series or Order, Claſs or Genus there; but every Plant will follow that which it next exceeds, in ſome mark of certainty. The two methods are, and muſt be, diſtinct in their manner, as they are in their purpoſe: here we ſeek to know Plants; there we ſhall ſtudy, being known, to arrange them; here we are to look for general diſtinctions, there we are to obliterate them; we can only know things by diſtinction; and we can only underſtand them by connection. The marks of Claſſes and of Genera, are arbitrary and artificial; nature knows no difference but of Species, from Species. Theſe diſtinctions are vague and temporary, but her connections certain and eternal.

Two Genera differ by ſome arbitrary character; and it is by this diſtinction that we know the Plants which belong to each: but when we know them we can place them better; for we may then find natural relations eaſily; and we ſhall certainly give them the preference to artificial Characters. Theſe doctrines, ſtrange to the minds of many who are filled with modern ſyſtems, it may be needful to explain by inſtances.

THE great Swede obſerves, that in many Plants the Chives cohere lengthwiſe, ſo as to form a tube; and he makes this the character of an artificial Claſs: this Character is found in Plants the moſt unlike in nature: It is in the *Violet*, and in the *Sun Flower*. The Claſs was ingeniouſly deviſed, and this mark anſwers its purpoſe; for by obſerving this tube of Chives in the Violet, the ſtudent is taught to look for it in the Syngeneſious Claſs; and by the ſubſequent diſtinctions of Orders and Genera, in that excellent writer, he will ſoon find to what genus and what name it belongs.

A MAN who had never ſeen a Violet, would thus plainly and eaſily be led to know the Plant; but he muſt be a poor philoſopher if he would reſt contented with that knowledge; and he muſt entertain very limited, and very humble notions of ſcience, if he would call this knowledge, Botany. 'Tis true that ſo far only artificial ſyſtems carry him: they have taught him to know the Plant with certainty; but he will eaſily perceive it has another place in nature: its general form does not agree with that of the Sun-Flower; nor will he be led to expect in it the ſame VIRTUES.

PERHAPS it will be thought the Violet is placed with leſs violence to nature, here, in our artificial method; but it was not to court that praiſe the Plant is mentioned. There may be a thouſand artificial methods deviſed; and though that will be certainly beſt, which, with equal diſtinctneſs, comes the neareſt nature, yet none of them are to be valued for more than they intend, nor preſerved longer than they are wanted. They give the knowledge of individuals, and upon that, all other knowledge muſt be founded; therefore there cannot be too much care or labour employed in forming them: but when they have ſerved their purpoſe, let them be rejected. Though particular knowledge is uſeful, it is general knowledge that is great: and when the ſtructure ſhall be raiſed, let no one wonder we throw down the ſcaffold.

ACCEPT favourably, candid reader, ſo much on this great ſubject of a natural method. We would have you entertain a juſt as well as great idea of this ſcience; and by always having this ſuperior light in view, you will perceive it more and more diſcloſe itſelf upon you; you will advance in one, as you purſue the other. The Claſs of Aggregates, whoſe rank in this our artificial ſyſtem, is very near the real place the Plants will have in nature, affords a plain and uſeful inſtance; it will encourage you perhaps, to purſue the track where the connection is much more obſcured by neceſſary diſtinctions.

CHAP. II.

Of the true CHARACTERS of the AGGREGATE, and the UMBRELLA'D PLANTS.

IT has been always ſeen, that the *Aſſembled Florets* and the *Umbrella'd Cluſter* had a ſtrong connection; though ſomething very diſſonant in form divided them: 'Tis thus truth will flaſh at times upon the human mind, even where its conſtant light cannot ſhine freely. The relation in this caſe has been known, though the connection was not diſcovered; and that could not be till this Claſs of Aggregates was formed.

IT has been ſaid, that if the Florets of a Tubulate Flower, as *Tanzy*, were all raiſed upon long Footſtalks, it would become an Umbell, from a Cluſter; this was a bold and not an injudicious thought; but it would fail in many things: for, 1. The true eſſence of an Umbell, though perhaps that has not been enough conſidered, conſiſts in the Flowers being perfect, and their *Footſtalks* being ſubdivided. Unleſs each Flower has its Cup, it loſes its perfect nature, and becomes a Floret; and unleſs there be a *general* and a *partial* diviſion of Footſtalks, there is no Umbell. What has been called, by an error in terms, a *Simple Umbell*, is no more than an *Aggregate* with *long Footſtalks*. The *Aſtrantia* and *Statice*, though hitherto placed in remote Claſſes, differ in this reſpect no otherwiſe than by a ſomewhat greater length of Footſtalk to each Flower in one than in the other. More or leſs, longer or ſhorter, make no diſtinction between Species and Species; much leſs between Claſs and Claſs: and it is no matter that the greateſt names give ſanction to ſuch Umbells. The modern ſyſtems have no ſuch Claſs as Aggregates; for the received method does not admit of their diſtinctions as a character; but in truth and nature, Scabious has as much right as Aſtrantia to be called an Umbelliferous Plant.

IN the ſecond place, if we could have got over this difficulty, and admitted ſimple Umbells, yet the Tubulate Florets would not have made an Umbell, for they have no Cups.

THE proper character implied by any term, muſt be eſtabliſhed juſtly before we can ſpeak with that preciſion which is required by ſcience of any relation to it, or correſpondence with it. This being regarded, and the diſtinctive ſtructure of aſſembled Florets, and of the Umbell known, we may not only ſee the general truth that there is a relation between the Plants with aſſembled Florets, and the Umbelliferous; but we ſhall find alſo that there is a connecting link between them.

AN Umbelliferous or Umbrella'd Plant, has the Footſtalks of many Flowers ariſing from one point, and again ſubdivided in the ſame manner; the ſecond like the firſt diviſion, riſing from one point again: there is naturally an Involucrum at the baſe of each of theſe two diviſions; and every Flower is perfect, having its own cups.

Now it is eaſy to ſee that Tubulate Florets, if raiſed on Footſtalks, would not make an Umbell; for, 1. There would be no ſubdiviſion or ſecond riſing of Footſtalks from a point; 2. There would never be any ſecond Involucrum, nor any thing in the place of it, although the general Cup might take the place of the firſt; and, 3. Theſe would be Florets ſtill, not perfect Flowers, as the Umbrella'd Plant ſhould have; for they would have no ſeparate Cups.

BUT though this advance from the Aſſembled Tubulate Flower to the Umbell, cannot be made without a threefold violation of that unaltered and unchangeable law of nature, which admits no gap in her gradations; there is yet a method of connection to be found: and this Claſs of Aggregate Plants affords it.

LET it be underſtood that in the method of nature, the deſtruction of Claſſes will be effected always by intermediate Claſſes, as that of Genera will be by intermediate Plants. The connection which deſtroys two Claſſes by uniting them, is to be made by a Claſs which is truly intermediate; that is, which has part of the characters of the one, and part of thoſe of the other. Thus the Aggregate Claſs, properly and perfectly formed, having part of the Tubulate character, and part of the Umbelliferous, ſerves as a link or connecting joint between them: being thus diſpoſed, it deſtroys two other Claſſes, which before were perfectly diſtinct; by uniting them, and itſelf the intermediate Claſs with them, into one greater arrangement: this will be again united with preceding and ſucceeding Claſſes by like means; till the whole Vegetable world is ſeen as one great and perfectly regular aſſemblage of Individuals, gradually riſing one above the other.

WHEN the character of the Aggregate Claſs is explained and aſcertained as diſtinctly as that of the Umbrella'd, we ſhall not only perfectly underſtand the one, but, by the ſame means, as diſtinctly know the other; and having before, with equal care, known the true characters of Aſſembled Florets, we ſhall ſee the progreſs of Nature from thoſe Aſſemblages of imperfect Florets, through the ſimply-cluſtered perfect Aggregate Flowers, to the more ſeparated Umbelliferous: and thus know thoroughly, that moſt complex part of Vegetable Nature.

AN Aggregate Plant has many Floſcules collected into a head, ſurrounded by a Common Cup; in theſe two particulars, it agrees with not only the Tubulate Flowers, but with the Radiate, Ligulate, and Aſſociate, that is with all the four firſt claſſes; but it has *Flowers*, not *Florets*, to conſtitute this head; and each Flower has its *ſeparate* and *diſtinct Cup*; and in theſe two particulars, of equal weight with the former, it agrees with the Umbelliferous Plants.

HERE then are two articles of agreement with any one of theſe Claſſes, and two with the other. The Aggregate is therefore perfectly ſeparate from both; and is placed at an exact diſtance between them. It muſt be allowed then to be that connecting Link, which was wanting to unite the four firſt Claſſes in our method, with the ſixth; loſing in that greater view, its own diſtinctive character, while, by uniting, it deſtroys alſo theirs; and thus far opening a way into a true natural method.

IT is uſeful to know this perfectly, not only with that higher purpoſe, but for the leſſer uſes alſo of an artificial method: for without theſe objects of the natural gradation, the characters of this artificial diſtinction would never be ſo deeply fixed in the ſtudent's memory; nor are they ſo perfectly neceſſary in any other place; ſince, for want of a preciſe determination of them, or of an accurate attention to them, this very natural Claſs has been ſtrangely torn and divided; and a great many Plants truly belonging to it, have been thrown into others. Thus the Eryngium and Aſtrantia, the Hydrocotyle and Echinophora, have been called Umbelliferous Plants, though wanting the true and only diſtinctive character of that alſo natural Claſs; and perfectly agreeing in every article of the diſtinctions of this. The common Thriſt might as juſtly be called an Umbelliferous Plant as any of theſe; and by a very little lengthening of the Footſtalks of its ſeparate Flowers, would be as well entitled to the character as any of them. But neither are they Umbelliferous Plants, according to the true character of that perfectly natural arrangement; neither could Thriſt, by lengthening the Footſtalks of its Flowers, be made one; if that were the caſe, the union of the ſix Claſſes would not exiſt; and nature would be more like art by far; than God has made her.

THE connection between the four aſſembled Claſſes and the Umbelliferous, is not to be ſought from the Tubulate kind, as we have ſeen, for there want three of the four gradations;

tions; and therefore the Plants, which ſhould in that way connect the two Claſſes, are not at equal diſtance from both: but taking the Aggregate, we ſee the exact proportion. The Aſſociate Claſs alſo makes an advance between the three firſt, and this fifth. Its Floret opening into longer ſegments, and its Chives, though they ſtand near, not being united.

The length of Footſtalk to the Flower, though an accidental and uncertain mark, yet is the ſtriking and obvious character by which the Aggregates differ from the Aſſociates one way, and from the Umbelliferous Plants the other: let us ſee the conſequence of giving more or leſs to this part.

Shorten the Footſtalks of the ſeparate Flowers of an Aggregate, and it will reſemble an aſſociate; lengthen them, and it will reſemble an Umbrella'd Plant: but in the one caſe, it will not be an Aſſociate, for each Flower will ſtill have its diſtinct Cup; and in the other it will not be an Umbelliferous Plant, for there will be no ſecond diviſion of the Footſtalks. It will thus be, even in an artificial ſyſtem, juſt what we have ſhewn it truly is in nature; it will reſemble the two Claſſes, but it can be of neither; it is ſeparate from both, and at equal diſtance between them: It is therefore the thing we ſought; the true connecting Claſs: its diſtinctions from both are certain, evident, and invariable; and while we thus trace its place in Nature, it fixes the true Characters of thoſe ſeveral Claſſes diſtinctly in our minds.

The Claſs of Aggregates thus formed, and thus diſtinctively characteriſed, admits into its limits many Plants, which have before been arranged under different Claſſes; but it excludes none that have ever been numbered among thoſe related to any of its branches.

The ſeveral Genera which it comprehends might be found capable of various diſtributions; but to us the moſt obvious, always will appear the beſt. Among thoſe who are fond of ſeeking deep for Characters, the thickneſs, the ſlightneſs, or the abſolute want of a Receptacle, or the length, the ſhortneſs, or total deficience of Footſtalks to the ſeparate Flowers, might ſerve as Characters of Orders, Sections and Subdiviſions; but the one of theſe methods requires the tearing the head to pieces, and the other the cutting it aſunder, to know the diſtinctions. We profeſs a diſlike to theſe torturings of Nature, and to all Characters which the eye does not at once diſtinguiſh; but if it were otherwiſe, theſe far ſought and deep laid Characters of difference, would be rejected here as indeterminate, and therefore uſeleſs.

As to the Receptacle, it conſiſts of two ſkins with a ſpungy matter between. Its thickneſs or ſlightneſs are only terms of more and leſs, not marks of true diſtinction, neither is it ever totally abſent. It is very great in Teaſell, it is ſcarce to be ſeen at all in Thrift, yet both theſe have it; and all Aggregates have it. The Stalk terminates in a head, ſurrounded by a Cup, within which, riſe the ſeparate Flowers. This Cup is formed of the outer Rind of the Stalk. The inner Rind and Blea terminate juſt within it in a kind of Button: this Button is the Receptacle, and from this the Flowers riſe. In ſome, as in Scabious, the outer part of the Blea, riſing up looſe and light, forms a kind of ſpungy matter between the two parts; in others, there is ſcarce any thing of this, as in the Thrift, yet even here there is ſome; and the Structure is the ſame always.

In reſpect of the Footſtalks of the ſeparate Flowers, they are in ſome ſhort, which is uſually where the Receptacle is thick, and in others longer, where that part is thinner; what would otherwiſe make the thickneſs of the Receptacle running up into theſe Footſtalks; but the difference of longer or ſhorter, is, like the former, only a mark of more or leſs, and can have no place in true diſtinction.

The Receptacle in theſe Plants is therefore of no importance; and all that truly relate to the Footſtalks of the Flowers as diſtinctive, is that they are always ſimple and undivided: whether they are long, ſhort, or ſeem wanting, is of no importance; but if they were divided, it would indeed be of conſequence, for it would remove the Plant out of the Claſs, placing it among the Umbelliferous kinds.

It is needful that a Claſs comprehending ſo large a number of Plants, ſhould have its Orders or Subdiviſions. Theſe we ſhall take, as in other inſtances, from differences which are obvious, in parts open to the eye; and dependent not on degree, but abſolute form.

All Aggregate Plants have the general Cup leafy in ſome degree; therefore no accurate diſtinction can be made from that; but every Flower having its ſeparate Cup; and theſe differing eſſentially in their form, compoſition, and diviſion, and being always preſent while the Plant is in Flower, and very evident and open to the ſight, the Characters of our neceſſary Subdiviſions or Orders, may be properly taken from them.

That the form, ſtructure, and compoſition of the head of an Aggregate Plant, may be perfectly laid before the eye, we have repreſented it in the firſt eight Figures, Pl. 1. in two very different Plants, the Scabious and the Teaſell. In the one of theſe, the Scabious, Fig. 1, 2, 2, 4. the compoſition is very evident, and the parts all large and proportioned in the uſual way; the Receptacle riſing but a little, and the ſeparate Cups of the Flower being very obvious: in the other, the Teaſell, Fig. 5, 6, 7, 8. the Receptacle ſwells to ſo immoderate a length, and the Chaffs which are placed between the Flowers, confuſe the view ſo much, that the eye of a ſtudent might be at firſt ſight perplexed. However, when the regular form of the Scabious head is firſt known, the length of the Receptacle in the other will be conſidered only as a difference of degree, not of kind; and the Chaffs between the Flowers in theſe heads, being of no importance to the Claſſic Character, will give no confuſion. The cautious eye being thus informed in one inſtance, the moſt diſſimilar in aſpect of all that can occur, will find no difficulty in any other. Let it only be remembered on this and all other occaſions, that the greater alliances of Plants, as Claſſes, take in only their greateſt Characters, not all of them: the reſt remain for a variety of ſubordinate diſtinctions of Order, Genus, and Species. Thus the Chaffs of the Receptacle here neglected in the Claſſic Character, are ſo obvious as to make part of a very diſtinct Generic mark; and ſo it will be found of all the others. If we received all into the Character of Claſſes, theſe would ſhrink from their uſe and nature, and we ſhould have only Genera.

This premiſed, that the whole ſcheme of diſtribution may be familiar, let us lead the ſtudent by the hand, from a view of the exterior form, to the compoſition and conſtruction of the Aggregate Head thus inſtanced, at Pl. 1. Fig. 1. he ſees the Scabious Head entire, as it ſhews itſelf upon the Plant while growing, he perceives this is a Cluſter of Flowers *a*. ſurrounded by a Common Cup *b*. and thus conceives diſtinctly enough the general idea.

Let him blow theſe aſunder with his breath, or part them with his finger, and he immediately ſees, as at Fig. 2. that every one of theſe leſſer Flowers is perfect in itſelf; he perceives that each has its own Cup, Fig. 2. *a*. that the Body of it, 2. *b*. no where joins, or is connected with any other, and that the union of ſuch a number of them into one head, reſults only from their riſing from one Receptacle or Swoln Top of the Stalk, 2. *c*. and being encloſed in one great Cup.

Let him proceed farther, by tearing off ſome of the Flowers, and he will lay bare the Receptacle in part, as at Fig. 3. *a*. and let him afterwards, if he pleaſe, cut open the Head perpendicularly, and he will ſee that this Receptacle is as repreſented at Fig. 4. *a*. nothing more than the Swoln Crown or head of the Stalk.

This

CHARACTERS of the Claſs of Aggregates.

1

The head of Scabious entire.

5 6

The head of Teasell entire.

2

The head of Scabious parted.

4

The Scabious head cut open.

7 8

The head of Teasell cut open.

3

The Scabious head laid naked.

The ſeven Orders of the Aggregate Claſs.

9

An even Cup.

10

A folded Cup.

11

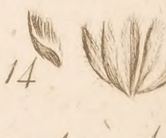
A ſimple Cup.

12

A double Cup.

13

A Til'd Cup.



14

A Cup of one leaf.

15

A Cup of many leaves.

16

Teaſell with it's Flower.

17

Thrift with it's Flower.

18

Globewort with it's Flower.

19

Scabious with it's Flower.

20

Globe-thiſtle with it's Flower.

21

Bird-weed with it's Flower.

22

Threadwort with it's Flower.

THIS Diſſection is not needful to his underſtanding the Character of the Claſs, for he knew it was an Aggregate, when he ſaw at Fig. 2. the ſeparate Cups of the Flowers; but it will prevent doubt, that the Head of Teaſell, or any ſuch Plant, aſſumed a different nature for being extended in length. He will ſee that the exterior form of Teaſell at 5 and 6, do not more perfectly agree with thoſe of Scabious, at 1 and 2, than the inner conſtruction at 7 and 8, with the inner ſtructure of Scabious at 4.

THE Claſſical form being now perfectly underſtood, we may proceed to the ſubordinate Diſtinctions of Orders.

THOUGH the Common or General Cup of the Aggregate Claſs is alike or nearly alike in many, there are great differences in the ſeparate Cups of the diſtinct Flowers. Theſe differences are ſufficiently obvious and certain, to give the Characters of abſolute diſtinction among the Plants, into a number of ſubdiviſions. In ſome, this particular or ſeparate Cup is hollow and plain; in others, it is folded; in others, it is ſimply cut down into one ſeries of Segments; in others, there are two or more ranges; and there are ſome, in which this ſeparate Cup, is only one hollow leaf; and others, where it is compoſed of ſeveral ſuch hollow Leaves.

THESE diſtinctions will give a fixed and certain diviſion of the Claſs, into no leſs than ſeven ſeparate Orders, which will greatly eaſe the ſearch after any particular Plant.

The Seven ORDERS of the AGGREGATE CLASS are theſe:

ORDER I.

PLANTS having an Aſſembled Head of Flowers with ſeparate Cups, in which this ſeparate Cup is of one piece entire, and *even* at the Edge or Brim. Pl. 1. Fig. 9.

ORDER II.

WHOSE particular Cup is entire, but *folded* at the Brim. Pl. 1. Fig. 10.

ORDER III.

WHOSE particular Cup is ſimple, or cut into a ſingle Series or Range of Segments. Pl. 1. Fig. 11.

ORDER IV.

Whoſe particular Cup is double, or has two Ranges of Segments. Pl. 1. Fig. 12.

ORDER V.

Whoſe particular Cup is til'd, or has ſeveral Ranges of theſe Segments. Pl. 1. Fig. 13.

ORDER VI.

WHOSE particular Cup is formed only of one hollowed oval Leaf. Plate 1. Fig. 14.

ORDER VII.

WHOSE particular Cup is formed of ſeveral oval hollowed Leaves. Pl. 1. Fig. 15.

IN the ſeven preceding inſtances, the Cups are figured alone, ſeparated from the Common Head, and diveſted of their Flowers; that the diſtinct form of each might be ſeen, without the incumbrance or confuſion of any other part. But that it may be alſo ſeen how they appear in complex Nature, they are repreſented in the ſucceeding Figures with the Flowers in them.

Fig. 16. gives an example of the *Even Cup* in the *Teaſell*, with its Flower.
Fig. 17. gives an example of the *Folded Cup* in the *Thrift*, with its Flower.
Fig. 18. of the ſimple Cup, in the Globewort, with its Flower.

Fig. 19. of the *Double Cup*, in the Scabious, with its Flower.
Fig. 20. of the *Til'd Cup*, in the Globe Thiſtle, with its Flower.
Fig. 21. of the *One-leav'd Cup*, in the Birdweed, with its Flower.
Fig. 22. of the *many-leav'd Cup*, in the Threadwort, with its Flower.

UNDER one or other of theſe Orders, may be arranged all the Aggregate Plants; for Nature, ſo far as yet known, has given no other differences in their particular Cups: yet it ſhould ſeem, that between the Plants of the ſixth and ſeventh Order, there will be at ſome time found whole Genera of intermediate Characters; for it is not uſual with Nature to leave chaſms in her works, or to paſs over great deficiencies in number of the parts. We are here, though in an artificial ſyſtem, tracing her ſteps, ſo far as may be in ſuch fetters, with an awful reverence.

WITH reſpect to the five firſt Orders, their differences ariſe in a way perfectly natural, and the four ſucceeding may be deduced plainly from the firſt, by a meaſured Scale, in the ſame method of gradual diviſion, by which Plants themſelves, in the true ſcale of nature, aſcend above one another by a meaſured addition of parts. The folded Cup is no more than the even one, with an exuberant edge; the ſimple Cup is only the folded one, cut down between the Plaits; the double Cup is the ſimple one, throwing off its outer Rind toward the baſe, in one ſeries; and the til'd Cup is only the double one, with Films ſplit off outward, in ſeveral ſeries.

THUS far we ſee the courſe of Nature's Diſtinctions evident to reaſon. Between theſe five, and the two following, there is the Diſtinction of a new tribe or family; though we have not encumbered the Student's mind with it in this place, becauſe the objects which come under it are few. The other Cups are all compoſed of Films, but thoſe of this and the ſucceeding Order are of Leaves. That this Tribe ſhould begin with a Cup of one Leaf, is moſt natural; and it would ſeem alſo natural that it ſhould aſcend by two-leav'd, three-leav'd, and by four-leav'd Cups, to the Order which ſtands next in our account, and which has five Leaves: but this is a reſearch for farther time: Its place will not come properly, till we have proceeded to theſe Plants in a natural method. There is much of the world yet to be ſearched; and there is much time for it. I have reaſons to conjecture that the Plants here ſuppoſed to exiſt, may be found far north; that tract of land will be now better ſearched, than has been heretofore; and gratitude demands this public teſtimony, that it is to the favour of the Hudſon's Bay Company alone, I owe the means of this new enquiry.

TEASEL. DIPSACUS

Generic Character.

Serrated Teasel.

Jagg'd Teasel.

HERBS,

WITH

Many FLOWERS assembled in a COMMON CUP,

SERIES the SECOND;

With the CHIVES distinct.

CLASS IV.

AGGREGATES.

ORDER I.

With the particular Cup of each Flower of one piece, entire, and even at the Brim.

GENUS I.

TEASELL.

DIPSACUS.

Character of the Genus.

The Head is oval, and the general Cup is longer than the Flowers.

Plate 2. o. *a b b.*

1. SERRATED TEASELL.

FULLER's TEASELL.

Plate 2. Fig. 2.

Character of the Species.

Dipsacus Fullonum.

The Leaves are cut like a Saw along the edges, and unite at the Base.

Fig. 2. *a b.*

THIS is a Biennial, native of our ditch sides, and flowers in June, a Plant of six Feet high: The Stalk is pale, the Leaves are of a strong green, the Scales of the Head are reddish, and the Flowers are crimson.

NATURE has given in the Head of this Plant a mechanic instrument, a kind of Brush for dressing cloth. We cultivate it; and the Heads grow larger, and the ends of their Scales turn backward, and become more useful.

2. JAGGED TEASELL.

Plate 2. Fig. 1.

Character of the Species.

Dipsacus Laciniatus.

The Leaves are cut in deep Segments, but unite at their Base.

Fig. 1. *a b.*

THIS is a Biennial, native of France and Germany, and flowers in July. The Stalk is firm, upright, five feet high, and whitish. The Leaves are of a fresh and fine green; they grow together at their base, the Stalk running through them; so that they make a kind of bason for holding water. The Scales of the head are whitish; the Flowers are crimson.

GENUS II.

SHEPHERD's ROD.

VIRGA.

Character of the Genus.

The Head is round, and the general Cup is ſhorter than the Flowers.

Plate 3. o. *a b.*

Of this Genus we know but one Species.

ROUGH SHEPHERD's ROD.

SHEPHERD's ROD.

Plate 2.

Character of the Species. Dipſacus Piloſus.

The Leaves have two Appendages or ſmall Leaves at their Baſe.

Plate 3. *a b.*

THIS is a Biennial, native of our waſte grounds, but not very common; a ſingular and pretty Plant, flowering in July and Auguſt. The Stalk is a yard high, rough to the touch, of a yellowiſh green, and ſpreads into wide branches. The Leaves are alſo of a yellowiſh green. The Scales of its buttony Heads are green. The Flowers are white. They cover the Head at once, making a complete white Ball, which appears fring'd all over with black; the Summits, which hang out beyond the Body of the Flower, being of that colour.

IT is frequent about Denham; we have it alſo in the neighbourhood of Woolwich; but I think not nearer London.

LET it not ſeem ſtrange that I have disjoined this Plant from the preceding. Though the generality of late, as well as earlier authors, have called it a Teaſell; Nature diſclaims the alliance, and ſome have ſeen it. Vaillant [a] has called it a Devilſbit, and referred it to the Scabious kinds; but ſtill the Plant is neither Teaſell nor Scabious, but a diſtinct Genus; and it is lucky that it has a diſtinct and known name, as it ſo much deſerves it. [b] Linnæus, excellent and accurate almoſt every where, acknowledges that Vaillant did not much amiſs in referring this Plant to the *Scabious:* but he would have not this alone, but all the Teaſells be referred alſo thither. I wiſh I could, with juſtice, ſpeak of his thought in this, as favourably as he of Vaillant's. To unite Genera in artificial methods, tends always to confuſion; and here it cannot be done without violation of Nature: the ſeparate Cups of the Flower in theſe Plants, is the great Character; and this in Teaſell is ſimple and entire; in Scabious, double and divided; they differ more than as Genera, they are of different Orders. Haller, obſervant always of Nature, calls in the Habit [c] againſt Vaillant, and the Scales between the Flowers; but there is a Scabious [d] which this more reſembles than it does the Teaſell, and many Aggregates have Chaffs between the Flowers. Both will, I hope, allow me the new Genus.

[a] Memoir. 238. [b] Hort. Cliffort. [c] Facies, p. 675. Enum. St. Helv.
[d] Scabioſa Syriaca, Plate 27. of this Volume.

GENUS

SHEPHERDS ROD. VIRGA

Generic Character.

1

Rough Shepherds Rod.

XANTHIUM. — BUR-WEED

Generic Character.

Tab. 5.

GENUS III.

BURWEED.

XANTHIUM.

Character of the Genus.

The Head is an obtuſe Cone; the general Cup is equal in length to the Flowers.

Plate 4. o. *a b.*

1. THORNY BURWEED.

Plate 4. Fig. 1.

Character of the Species. Xanthium Spinoſum.

The Leaves have no Footſtalks; and the Stalk is thorny.

Fig. 1. *a b.*

THIS is an Annual; native of Portugal, and flowers in June. It grows to two feet and a half high. The Stalk is pale; the Leaves are of a fine graſs green; the Thorns, which grow by three's near the Baſes of the Leaves, are brown. The Flowers are whitiſh, with a tinge of green; and the Fruit, which is rough, and grows on other parts of the Plant, is of a pale Olive colour.

2. UNARMED BURWEED.

Plate 4. Fig. 2.

LESSER BURDOCK.

Character of the Species. Xanthium Strumarium.

The Leaves have Footſtalks; and the Stalks have no Thorns.

Fig. 2. *a b.*

THIS is an Annual; native of our ditch banks, waſte grounds, and old dunghills, but not common. It riſes to a foot and a half high; and flowers from July to September: a rugged Plant of irregular growth, but with ſingularity enough to ſupply the place of beauty. The Stalk is of dirty red, ſpotted with black; or a very deep gloomy purple. The Leaves are of a faint green. The Flowers are pale and whitiſh. There are, beſide theſe, diſtinct Fruits or Seed Veſſels, on different parts of the plant. The Seed Veſſels are the part which occaſioned its being called Burr, and Little Burdock, for they are covered with a kind of hooked Spines.

IT is ſaid this Plant will cure the Evil: And one may be led to ſuppoſe there are valuable qualities in it, becauſe Nature has given it in a manner to the whole world: a circumſtance that occurs in very few Plants; indeed, with reſpect to America, in ſo few, that it has been thought Europe, and that vaſt country, had none in common.

THIS is a problem ſo much conteſted; and the preſent inſtance decides it ſo fairly, that it may not be amiſs to enter upon it, ſomewhat at large, now we have ſo fair an occaſion.

AMERICA furniſhed us ſo many new Plants, and we received from thence ſo little that bore even a reſemblance to what we had before in Europe, that imagination, which always outruns judgment, and in its raſh haſte, generally concludes upon too ſlight premiſes, preſently declared there was no Plant common to the new world, as it is called, and the old.

old. We had been accuſtomed to receive very different Plants from different places, and therefore ſuppoſed they produced only different; and when we thought this of Europe and of Aſia, we might very well believe it of America, even in reſpect of all the world. But it ſhould have been conſidered, that different countries might produce the ſame Plants with our own, though we had not received them; and there was the more reaſon to ſuppoſe this, becauſe as ſingularity pointed out among many new things which ſhould be collected, what was leaſt like our own, was moſt likely to be firſt regarded.

FARTHER reſearches have ſhewn, that howſoever different the climate may be in Europe and in Aſia, yet there are Plants common to both. I have received this Xanthium from China; and Linnæus declares it native of Ceylon, and of Japan. The Common Engliſh Water Lilly, both the white and yellow, grow alſo in the Eaſt Indies; and the Common Arrowhead, is as frequent in Sumatra as in England. It is ſo with many other Water-Plants; but not with all, nor is it limited to theſe: there is much more to be yet aſſerted concerning theſe; but let the truth, which is a ſtranger, diſplay itſelf by juſt degrees.

IT ſhould ſeem in the firſt place, that there are a certain number of univerſal Plants, which grow in every kingdom; and are Vegetables of the Globe, not of this or that quarter of it.

WE ſhall find moſt of theſe to be the Plants, whoſe ſituation renders the power of Elements almoſt equal in whatever part they grow. The greater number of them are inhabitants of high mountains and deep waters; here the temper of the air is leſs altered by the climate, and we therefore may leſs wonder at ſeeing the ſame Plants: but all that are common to ſo remote regions, and ſo different climates, are not the natives of theſe peculiar places. The Xanthium, our preſent ſubject, grows upon the rubbiſh about Canton, as freely as at Nottingham; nor is this a ſingle inſtance.

THERE is a certain tract about the North Pole, wherein for the whole circuit, the ſame Plants are found; perhaps it is the ſame about the South Pole, but the country is unknown. As it is hard to ſay how far North America extends, or what are the limits where it joins, if it does join, with other northern countries; we are accuſtomed to call the extream northern world, by a name deduced from its place, and to give one term to the extent of kingdoms this way, to whatever others they belong; calling them the Polar Countries. If we examine the Vegetable products of theſe countries, we ſhall find them nearly the ſame in all; and in a certain latitude, that difference between America and European Plants, which has been fancied ſo abſolute, ceaſes entirely.

THE Plants of the extream North, ſo far as we know, are all the ſame; all low; and all of what are uſually called the imperfect Kinds: From this Northern tract, where the circuit of the Globe is confined in very narrow limits, they ſeem to have extended every way, and to have encreaſed in parts, and ſtature.

THERE will be a place in the courſe of this work, to examine that encreaſe; and ſee how much of it is owing to heat and other cauſes: for when we ſhall come to treat Plants in the method of Nature, it is from this northern point, and this moſt ſimple ſtate, we are to trace them: A few ſhort obſervations only can be admitted here, to lead the way to a belief of that moſt certain fact, that America and the other parts of the world, have ſome Plants in common.

IN the Latitude of 83, which is as far as men have ſailed, we find Moſſes only; the Conferva in the waters; the Ulva in the boggs; the Coralloide Moſſes on dry land; theſe

theſe are the ſimpleſt of all Plants; and theſe only are found at that extream North diſtance, whatever be the country.

I HAVE not had the opportunities for an exact reſearch, which are now offered, nor indeed has any; but what I know from faithful correſpondents hitherto, is this.

IN the Latitude of 82, which is but a very ſmall advance from that moſt Northern part juſt mentioned, are found Strawberries. They are found every where round the Pole at this diſtance.

BUT this is not all; there are many other Plants which take in larger circles, at more diſtance, and yet are equally, and as certainly univerſal. The common Violet is found on the coaſts of Baffins Bay, in Greenland, in Nova Zembla, and in Muſcovitic Tartary, in the Latitude of 76. This is a Circle, in all Parts of which, I doubt not, Violets are found, as we ſee them in ſo many places there, and thoſe ſo diſtant.

I HAVE received our common Mouſe-Ear from Cumberland Iſle, from Greenland, Lapland, North Cape, and Siberia; upon examination, all theſe places lie in the Latitude 73; and it is hence reaſonable to conclude, that this Plant is alſo univerſal at that diſtance from the Pole.

FARTHER than this, my opportunities of perſonal enquiry have not enabled me to determine; but even upon this foundation, that the Plants are univerſal from 73 degrees to the Pole, we might be very reaſonably led to doubt the propoſition, that any one quarter of the Globe was altogether without thoſe common to another.

WHY ſhould it be thought ſtrange a Plant ſhould travel by its Seeds from 73 degrees to 50? We know the great opportunities there are of conveyance by winds and ſea; we are ſenſible that the quantity of Seeds produced by Plants is ſo great, that if out of ten thouſand, one only ſhall live, the Plant will be preſerved, and propagate itſelf where that ſhall fall.

IT is not needful we ſhould ſuppoſe a ſudden flight of the Seeds of any Plant of 23 degrees: let us conſider the length of time there has been for this migration; let us take into the conſideration alſo, the nature of the Plant, and it will appear ſo far from wonderful, that Mouſe-Ear ſhould be found both in Europe and America, that there will be required almoſt a miracle to prevent it. From Cumberland Iſle and Greenland, the courſe is almoſt due South; and we very well know, there are not wanting North winds, in that part of the world, to forward it. The Plant Mouſe-Ear, produces Seeds altogether innumerable; they are very minute, and they are winged with ſuch a quantity of Down, that they will float in the air a long time, even in a calm. They may then be carried very far by winds; and the Plant is ſo hardy, that no ſoil prevents its growth; rocks, abſolute naked rocks, receive the Seed, and are often covered at vaſt heights, and in an amazing manner, by the Plant. What then prevents its propagating itſelf gradually Southward to a certain Latitude; and from the Northern Countries, ſpreading itſelf, not only to Newfoundland, but thence alſo to Penſylvania, Virginia, and Carolina?

THOUGH it will grow in extreme cold, we know that is not neceſſary to it, becauſe it grows in England, and other parts of Europe: nay it thrives better here; for in the very cold Countries juſt mentioned, it never exceeds three inches in height, whereas with us, it will be five or ſix.

To confirm this opinion farther, Mouſe-Ear is found in Newfoundland, and in ſome other parts of our Colonies; it would be raſh to have judged from this alone, that it was

native

native there; for the Seeds of many common Paſture Plants, may have gone from hence with Graſs Seed, which our Planters often have from us; but the finding the Plant there, and the ſeeing by what a natural and eaſy courſe it may have come thither, from the more Northern Countries, not from Europe, together, amount to as good proof as reaſon can expect in ſuch a caſe.

IF it be aſked, why, on the ſame principle, many more Plants are not alſo found native in North America and Europe? the anſwer is eaſy. This is not the only one; but many are not to be expected on this plan. The extreme North does not produce a very great number; and of theſe, few have the advantages of light Seeds and natural hardineſs, that we find in Mouſe-Ear.

ANOTHER obſervation will naturally occur here to the Reader; that the northern Plants are, ſo far as hitherto named, extremely ſhort or low: it is ſo univerſally, ſo far as I have ſeen: and height in Vegetables ſeems certainly, though not univerſally, to encreaſe with the Sun's power. The Moſſes of 83 degrees Latitude, are the loweſt of all Plants; the Strawberries of eighty-two lie on the ground, yet are a little higher than thoſe Moſſes; the Violet of Baffins Bay is ſomewhat taller than the Strawberry; and the Mouſe-Ear of ſeventy-three, is, to all theſe, gigantick.

IT would be vain and abſurd, to ſuppoſe that all Plants followed this law of encreaſe exactly, for then the difference of ſoils and accidents could be allowed no power; and the Plants of every country would be all of one heighth: yet I muſt be permitted to ſay here, what will be proved in its due place by a great number of inſtances; that notwithſtanding the multitude of exceptions, there is ſuch a law; and that were all accidents equal, which they never are, or can be, the effects would be more viſible. The Mouſe-Ear, which is in a manner univerſal in ſeventy-three, grows to three inches high; the Jeruſalem Artichoak, which is native of 3 degrees, grows to 12 feet. We may trace in theſe extreme inſtances, the outlines of a proportional advance in growth, as in climate. The Jeruſalem Artichoak is 70 degrees more South; and it is ſeventy times as tall. The Hollyhock of Borneo, has the ſame heighth of twelve feet; and Mouſe-Ear its original three inches at the ſame diſtance North in Aſia, as America.

THESE are the Extreams, ſo far as I have found; he that would fill up the intermediate degrees, muſt find the Plants on which the climate acts with leaſt interruption; and he muſt meaſure theſe in places where they have their genuine ſtature. Nightſhade upon the Downs, is three inches in height; upon a Dunghill, it is a yard or more; but neither of theſe is the true, that is, the natural height of the Plant.

THERE will be an opportunity, in the courſe of this work, to examine theſe differences of the ſame Plant, and their cauſes: the principles of that enquiry are laid down in a preceding volume; only let the general idea of them have ſo much weight here, as to ſhew that a rule may be juſt, though liable to a million of exceptions.

THAT difference in the ſtature of a Plant, which we ſee can ariſe in the ſame place, from any one of many accidents, we muſt not be aſtoniſhed to find take place in very remote countries; nor muſt we bring this different height, when there is no other, as a reaſon to ſuppoſe two Plants not the ſame, which are the product of countries, ſuppoſed not to have any in common. The XANTHIUM, which is our preſent immediate ſubject, is one of Nature's univerſal Plants; more ſo indeed, than any of thoſe which take their little circles round the Pole. Beſide being found throughout Europe and Aſia, Africa affords it; and what is more to our immediate purpoſe here, America.

NOR is it limited to any one part of the new world any more than of the old; I have received it from *Quebeck*, from *Carolina*, from *St. Chriſtophers*, and from *Jamaica*; nor does the Plant in any of theſe places differ from the wild Engliſh kind, any other way than in ſtature and luxuriance of growth. With us the Plant is eighteen inches high; in Canada it grows to ſix feet: there is in the general aſpect, an appearance of difference, but, when examined, it vaniſhes.

THIS Xanthium, therefore, is a proof that there are Plants common to America, and to the other parts of the world; nor is it the only one by many. The queſtion ſo long diſputed, ſeems capable therefore of a tolerably fair deciſion.

UPON the whole, it ſeems that there are ſome Plants, though not many, which are common to Europe and to North America; and that there are many common to South America and Aſia.

WITH reſpect to the North American, there are beſide thoſe already named, a Conyza common to that country, and the Pyrenæan mountains, and ſome others. I had laſt year an opportunity of ſeeing, beyond conteſt, that ſome Moſſes, common on Hampſtead Heath, grow alſo in America. Mr. Gray, Seedſman, in Pall-Mall, received many Plants from thence, in a condition of growth, and their roots were covered with the Great Hypnum, the Bog Sphagnum, and two or three other kinds frequent there.

RASH obſervations might add vaſtly to the liſt of theſe Plants; for Plantain, Sorrell, and many other common things in our paſtures, are as frequent about our Plantations there: but the Seeds of theſe have doubtleſs been accidentally carried over from hence; and in this enquiry, great diſtinction is to be obſerved between ſuch Plants and the proper natives.

WITH reſpect to the products of South America, which are common to Aſia, there is alſo to be great caution uſed, to find out from their place and other accidents, which are native, and which have been in reality brought thither from Aſia: for we very well know that the firſt ſettlers in South America, were very intent on raiſing in the Weſt-Indies, the products of the Eaſt. However, if we leave out of the account, ſuch valuable articles, we ſhall find ſtill a great number, which men could never be intereſted to carry over, and which are in places far from ſettlements. The Coſtus of Ceylon, is found alſo in Surinam and the Braſils; the Canna is common to Coromandel and Jamaica; and Feuille's Alkekengi is equally common in Peru and Borneo.

WE ſee therefore by this enquiry, that no part of the world has altogether diſtinct Plants from all others. The Alpine Plants are common to the high mountains, and the underwater Plants to the deep Lakes of Europe, Aſia, Africa, and America. In theſe particular ſituations, the univerſality of Plants, is as evident as in the circles near the pole; and beſide thoſe we have already inſtanced, there will be found in the courſe of this work, ſeveral more American Plants, which, though underſtood to be diſtinct Species, are no more different than the Xanthium of Canada and England.

3. ORIENTAL BURWEED.

Plate 4. Fig. 3.

Character of the Species. — Xanthium Orientale.

The Stalk is unarmed; wedged, and cut into three Lobes.

Fig. 3. *a b c.*

THIS is an Annual; native of Egypt, a Plant of two foot high, but of no beauty; flowering in Auguſt. The Stalk is pale, the Leaves are of a light freſh green; the Flowers are pale olive colour'd.

GENUS IV.

PINKWEED.

KNAUTIA.

Character of the Genus.

The Head is flat, and is compoſed only of five Flowers: the general Cup is entire, cylindrical; and cut into a few ſharp Segments at the Brim.

Plate 5. o. *a b.*

1. CRIMSON PINKWEED.

Plate 5. Fig. 1.

Character of the Species. Knautia Orientalis.

The Leaves are linear and wav'd; the Heads ſtand on ſimple Footſtalks.

Fig. 1. *a b.*

THIS is an Annual, native of the Greek Iſlands, and flowers in July. It is a ſlender twiggy Plant, of a yard in heighth; and of a very ſingular and not unpleaſing aſpect. The Stalk is of a dark green, and ſpreads towards the top in a wild, but pictureſque manner. The Leaves are of a freſh and ſhowy green; the Flowers are of a fine glowing crimſon. The ſeparate Flowers are ranged in ſo even and regular manner in the Head that the whole appears only as one Flower, not a little reſembling, at a diſtance, a common ſingle Pink; whence its Engliſh name.

2. AZURE PINKWEED.

Plate 5. Fig. 2.

Character of the Species. Knautia Occidentalis.

The Leaves are lanced and indented; the Heads ſtand on divided Footſtalks.

Fig. 2. *a b.*

THIS is a Biennial, native of Canada and other parts of North America; a very handſome Plant, flowering in Auguſt. The Stalk grows to two foot and a half high; it is ſlender, tough, of a ſtrong green, and very much branched. The Leaves are of a dark and coarſe green: the Flowers are of a perfectly fine blue. The Plant is little known in Europe, and does not ſucceed well with us in gardens. If the Seeds be ſown in Spring, they ſeldom come up; if in Autumn, the young Plants die in the Winter. I had it here at Bayſwater, in 1762, on one of my Sand Hills, from Seeds from Canada, ſown in Autumn, and care in ſheltering the Seedlings in hard weather. Pluckenet[e] ſeems to have named this, and, as I think, no other Author.

[e] Alm. 335.

Generic Character.

Crimson Pinkweed?

Azure Pinkweed?

Generic Character.

GENUS V.

FAIRWEED.

ALLIONIA.

Character of the Genus.

The Head is flatted, and compoſed only of three Flowers; the general Cup is entire and cylindrick; but cut into deep ſharp Segments at the Brim.

Plate 6. o. *a b.*

1. HEART-LEAV'D FAIRWEED.

Plate 6. Fig. 1.

Character of the Species. Allionia Violacea.

The Leaves are Heart-ſhaped; and the Cup is cut into five Segments.

THIS is an Annual, native of Portugal, and flowers in June; a very handſome Plant, and well entitled to its fair name; which is but its country name in another language. It riſes two feet and a half high. The Stalk is tender and branched. The Leaves are of a very fine Graſs green; and the Flowers are of a beautiful Violet blue.

2. OVAL FAIRWEED.

Plate 6. Fig. 2.

Character of the Species. Allionia Incarnata.

The Leaves are oval, with one half running farther down the Footſtalk than the other. The Cup is cut very deeply into five Segments.

Fig. 2. *a b.*

THIS is a Biennial, native of Spain; a Plant of two feet high; flowering in May and June. The Stalk is tough, and of a blueiſh colour. The Leaves are of a ſtrong blue-green. The Flowers are of a very delicate pale crimſon.

IT muſt be eaſily ſeen that this Genus approaches very nearly to the preceding; but they cannot be joined. Difference in degree, be it ever ſo great, can never conſtitute a juſt diſtinction; but difference in number, be it ever ſo little, ſo long as it is fixed and certain, may. There is alſo a mark of difference in the Seeds, but we do not ſend the Student ſo far; nor delay him ſo long for a genuine character: in Pinkweed, the Seeds are hairy at the top; in Fairweed, they are ſmooth. This is mentioned to confirm the propriety of keeping the two Genera diſtinct; but the obvious character in the Flowers is ſufficient to eſtabliſh it.

GENUS

GENUS VI.

FEVERWORT.

DORSTENIA.

Character of the Genus.

The Head is flat, and compoſed of many Flowers; the general Cup is entire, flat, and undivided at the Edge.

Plate 7. o. *a b.*

1. HEART-LEAV'D FEVERWORT.

Plate 7. Fig. 1.

Character of the Species. Dorſtenia Alexiteria.

The Leaves are Heart-ſhaped, ſharp pointed, and indented; and the Head is ſquared, and wav'd along the Edge.

Fig. 1. *a b.*

THIS is a Perennial, native of Campeachy; and flowers in May. A Plant of moſt extreme ſingularity, reſembling nothing in the whole Vegetable world, except two other Species of the ſame Genus; and of qualities as peculiar as its form. The Leaves are three or four inches long, and riſe ſeparately from the ground, with long ſlender Footſtalks. They are of a fine bright green; but the colour ſoon fades, and they become brown, and droop. The Stalk, which ſupports the Head, riſes naked and ſimple from the Root, and is ſlender, and ten inches high. At its top ſtands a flat head of Flowers, half buried in a ſpungy receptacle of a ſquare form, which fills the boſom of the Cup, and grows into one body with it. The colour of the Receptacle is pale; and the Flowers are of a whitiſh green. They are ſmall, one leaved, and incloſed in a little Cup, which grows to them, as the Cup does to the Receptacle; ſo that they are very difficultly ſeparated or examined. Hence has ariſen the difficulty of giving a true character of the Plant, by thoſe, whoſe ſyſtems made it neceſſary to introduce every part.

2. PINNATIFID FEVERWORT.

Plate 7. Fig. 2.

Character of the Species. Dorſtenia Drakena.

The Leaves are cut almoſt to the middle Rib, into a few Segments, with entire Edges; the Head is oval.

Fig. 2. *a b.*

THIS alſo is a Perennial, native of Vera Cruz, and other parts of the Spaniſh Weſt-Indies; a Plant not at all leſs ſingular than the preceding; and flowers in June. The Leaves are of a deep ſtrong green; they riſe ſingly from the ground, with long Footſtalks, to the height of about eight inches. The Stalk which ſupports the Head, is about ſeven inches high, naked and ſlender. The head is green, and the Flowers are of a greeniſh white.

3. FINGERED

Finger'd Fevernwort.

Simple leav'd Fevernwort.

3. FINGERED FEVERWORT.

Plate 8. Fig. 1.

Character of the Species. Dorſtenia Contrayerva.

The Leaves are pinnatifid, with a fingered aſpect, and the Segments are ſerrated: the Head is ſquare, and undivided at the Edge.

Fig. 1. *a b.*

THIS is a Perennial alſo, native of Peru, and flowers in May; a Plant agreeing in its manner of growth with the two preceding. The Leaves are eight or ten inches high; they grow ſingly from the ground, on long ſlender naked Footſtalks. They are of a faint green; and their Stalk and the middle Rib, are often brown or reddiſh. The Head is perfectly ſquare, flat, and undivided at the edge; it is of a green colour; and the Flowers are alſo of a greeniſh white. The Stalk, which ſupports this, is ſimple, naked, ſlender, and brown; and is about eight inches high.

THE root of this third kind, is the Contrayerva uſed by Apothecaries: and a much larger quantity than they employ, is conſumed in dying. The three Plants are ſo like, and the people who collect Drugs ſo negligent, that the Roots of them all are gathered under this name; as the Roots of three or more Plants, are uſed under the name of Virginian Snake-weed; or, as the Swiſs wound Herbs, conſiſt of every Plant they lay their hands upon.

4. SIMPLE LEAVED FEVERWORT.

Plate 8. Fig. 2.

Character of the Species. Dorſtenia Caulescens.

The Leaves are lanc'd; and the Heads are ſquare.

Fig. 2. *a b.*

THIS is a Perennial, native of Campeachy; where it grows on the moſt barren rocks, to the height of two or three feet: A Plant altogether unlike the three preceding in its general aſpect, but having the ſame wonderful kind of Head as they have.

THE Stalk is weak, reddiſh, and tough; and has but few Branches. The Leaves are broad, but of a lanced ſhape; and waved at the Edge. The Heads do not riſe on peculiar Stalks from the ground, as in the three preceding kinds, but one Stalk produces a great many: each is placed on a ſlender Footſtalk, growing from the boſom of a Leaf. The Heads are greeniſh, and the Flowers are whitiſh, but nearly of their own colour. It flowers in Auguſt.

NATURE ſeldom varies ſo extremely in the Species of the ſame Genus, as in this Plant; but the genuine character is ſo abſolute, and ſo wonderfully diſtinct from all others, that there can be no doubt about the joining them.

GENUS VII.

SHEEP ROT.

HYDROCOTYLE.

Character of the Genus.

The Head is rounded; the general Cup is compoſed of four ſharp pointed Leaves. The ſeparate Flowers are raiſed on ſhort and ſlender Footſtalks.

Plate 9. c. *a b c.*

1. FIVE FLOWERED SHEEP ROT.

Plate 9. Fig. 1.

Character of the Species. Hydrocotyle Vulgaris.

The Head is compoſed only of five Flowers. The Leaves are round and crenated; and have their Footſtalks inſerted in their Centre.

Fig. 1. *a b.*

THIS is a Perennial, native of our boggy grounds; a very low and ſmall, but very ſingular Plant; flowering in June. The Stalk never riſes from the ground, but runs upon it, rooting at the joints, and is of a whitiſh green. The Leaves are of a freſh, though not ſtrong green; their Footſtalks are pale, and about an inch or little more in heighth. The Flowers are ſmall and white; the Heads ſtand upon very ſhort Footſtalks, riſing from the main Stalk, uſually together with a Leaf.

IT has been a cuſtom to range this with the Umbelliferous Plants, but its very aſpect might have ſhewn with how much violence to Nature. Here are no ſecond Involucrum, nor divided Footſtalks; and we have ſhewn there is no Simple Umbell. The Plant is a true Aggregate. If the Segments of the Cup are united into one Body, and the Flowers drawn down into it, you would have a Dorſtenia.

2. MANY FLOWERED SHEEP ROT.

Plate 9. Fig. 2.

Character of the Species. Hydrocotyle Umbellata.

The Head is compoſed of a great many Flowers. The Leaves are waved at their Edge; and have the Footſtalk fixed in the Centre.

Fig. 2. *a b.*

THIS is a Perennial, native of Penſylvania; a Bogg Plant as ours, and very like it in the general aſpect. It flowers in June. The Leaves are of a fine freſh green, and are placed on long Footſtalks; the Flowers are ſmall and white.

ONE would imagine Linnæus had excepted againſt the other Species of this Genus, as not belonging to the Umbelliferous Plants, by giving the word Umbellata, as the trivial name of this: but whatever exception (and there is ſufficient) lies againſt them, is good againſt this alſo.

SHEEP-ROT. HYDROCOTYLE

Generic Character.

Five flower'd
Sheep Rot.

Many-flower'd
Sheep-Rot.

SHEEP-ROT. HYDROCOTYLE

2

Kidney leav'd
Sheep Rot.

Arrow'd Sheep-rot.

3. KIDNEY LEAVED SHEEP ROT.

Plate 10. Fig. 1.

Character of the Species. Hydrocotyle Americana;

The Leaves are roundiſh, ſlightly lobated; and have a ſlit in the Front, which reaches quite to the Centre.

Fig. 1. *a b.*

THIS is a Perennial, native of North America, and flowers in June. It creeps upon the ground, with pale, ſlender Stalks, irregularly extending themſelves every way. The Roots are little Tufts of ſlight and ſhort white Fibres at the Joints, from which the Leaves and Flowers riſe alſo. The Leaves are of a delicate, but not ſtrong green on the upper ſide; and paler underneath. The Flowers are ſmall and white.

IT will be obſerved, that we retain the received trivial Latin names of all the Species in the Margin; but the reader will be juſt enough to underſtand, that we retain them as convenient, rather than good ones; and though we uſe them, we by no means approve them. They are a kind of ſimple, ſhort notices of Plants, which though they might eaſily have been better, as in this inſtance (for why ſhould this Species be called American, more than the former?) yet will ſerve the purpoſe as they are. They are appellations in which the Botanic world at preſent, ſeem to be agreed; and they ſerve here inſtead of a multitude of Synonyma, often as bad as themſelves; for they make a kind of catalogue, to which every modern book is an Index.

IT is the more proper for us to retain them, becauſe we often find it neceſſary in compliance with the natural characters of a Plant, to change its Genus; but this, by the help of the trivial key, is always to be underſtood by thoſe who chuſe to conſult other Authors, without confuſion.

4. ARROWED SHEEP ROOT.

Plate 10. Fig. 2.

Character of the Species. Hydrocotyle Aſiatica.

The Leaves are arrowed with a Kidney-ſhaped Baſe; and many riſe together at a joint.

Fig. 2. *a b.*

THIS is a Perennial, native of the Eaſt Indies, a low Plant, but very leafy, and therefore exceedingly conſpicuous on the ground; flowering in May. The Stalks are weak and tender; the Leaves are of a very fine and freſh green. The Flowers are white and inconſiderable.

AUTHORS were by no means agreed to what Genus to refer this Plant for ſome time. Herman [f] underſtood it to be a kind of Corn Sallad (I am afraid it would have proved a fatal one;) and Plukenet [g] thought it of the family of Crowfoots.

[f] Par. Bat. 238. [g] Alm. 314.

5. LINEAR

5. LINEAR SHEEP ROT.

Plate 11. Fig. 1.

Character of the Species. Hydrocotyle Chinenſis.

The Leaves are linear and obtuſe; the Head has many Flowers.

Fig. 1. *a b.*

THIS is a Biennial, native of China, a Plant altogether ſingular, for one of this Genus, by the diſcordant ſhape of its Leaves; flowering in Auguſt.

THE Stalk is ſlender but firm; it creeps upon the ground as the others; and ſends uſually two Leaves from the ſame joint, with each Tuft of Roots. The colour of the Stem is pale; the Leaves are of a very fine freſh green; the Flowers are white.

THE Leaves of this Plant, ſo perfectly different from thoſe of the four other Species, rob us entirely, of what they would indeed but ill have left, the common Engliſh name. The Leaves of the firſt are ſo well rounded, and ſtuck on the Stalk in ſo odd a way, without breaking in upon the margin, that the Engliſh ſhepherds, who had too much cauſe to know the Plant, called it Pennywort; and as there was a different Plant entirely, which had the ſame kind of Leaves [h], they were ſoon taught to diſtinguiſh the two by the places of their growth, calling this Marſh Pennywort, and that Wall Pennywort: Thus far the difficulty was to be got over by the help of an epithet: but here is a Plant, whoſe Flowers plainly declare it to be of that Genus, but whoſe Leaves are not in the leaſt like pieces of money.

WE think it very eſſential to have a diſtinct Engliſh name to every Genus, but cannot always anſwer for the propriety of thoſe we uſe; becauſe where there is an old received one, we prefer it always, for that reaſon, to a better that ſhould be new or but leſs known: therefore we have retained to this Genus, an Engliſh name, as old and well received as the other, though perhaps founded in error, and which will ſuit all Species, becauſe it is not taken from the ſhape of the Leaf; this is SHEEP-ROT. The Shepherds have long thought it gives that terrible diſeaſe, the rot, to their ſheep, becauſe they uſually fall into it when they are kept in paſtures where it grows; but the fact may be true, though owing to another cauſe: this Plant never grows but in wet ground; and wet ground will give the rot, whether this grows there or no. They called it White-Rot, to diſtinguiſh it from Sun-Dew, which is another boggy Plant, accuſed of the ſame miſchief. As we have no reaſon for the epithet in one caſe, we may drop it in the other.

[h] Cotyledon umbilicus veneris.

Linear Sheep-rot.

HEALTH-WORT. PANAX

Generic Character.

Woody Health-wort.

Five-leav'd Health-wort?

Three leav'd Health-wort.

GENUS VIII.

HEALTHWORT.

PANAX.

Generic Character.

The Head is broad and flat; the general Cup is ſhort, and compoſed of narrow ſharp pointed Leaves; the ſeparate Flowers are raiſed upon long Footſtalks, and are compoſed each of five Petals, which turn back at the End.

Plate 12. o. *a b c.*

THIS is the character of the Seed-bearing or Female Plants; there are beſide theſe Male Plants of the ſame Species, whoſe Head is globular.

1. FIVE LEAVED HEALTHWORT.

Plate 12. Fig. 1.

GINSENG.

Character of the Species.

Panax Quinquefolium.

The Leaves ſtand by threes; and each diviſion is into five.

Fig. 1. *a b.*

THIS is a Perennial, native of Tartary; and of Canada, Virginia, and other places in North America; a Plant of wonderful eſtimation in many parts of the world. It grows to a foot or more in heighth. The Stalk is ting'd with crimſon; the Leaves are of a freſh and bright green; the Flowers are white; after theſe come Berries of a Kidney-like ſhape, and of a ſtrong crimſon, full of yellowiſh pulp, in each are two Seeds. It flowers in Auguſt.

THIS is the Plant whoſe Root is the famous *Ginſeng*, of which the Chineſe think ſuch wonders: they eſteem it a cure for almoſt all diſeaſes; and fancy it will make men any thing but immortal. It has been try'd with us, and is found a cordial and reſtorative, but its virtues by no means anſwer the Chineſe accounts.

THEY might well be deceived who looked for the ſame virtues in the Root Nindſi, which is a Species of an umbelliferous Plant Sium, altogether different from this. We have it uſually ſtale and bad, and to encreaſe the diſappointment of thoſe who have ſometimes thought of taking it, we have found that when it has been bought at its weight in gold, the ingenious Chineſe has lodged lead in its middle to encreaſe the profit.

2. THREE LEAVED HEALTHWORT.

Plate 12. Fig. 2.

Character of the Species.

Panax Trifolium.

The Leaves ſtand by threes; and each diviſion is into threes again.

Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, a low Plant, flowering in July. The Stalk is pale; the Leaves are of a faint and yellowiſh green; the Flowers are white; the Root has the flavour of the other, but weakly.

3. WOODY HEALTHWORT.

Plate 12. Fig. 3.

Character of the Species.

Panax Fruticoſum.

The Stem is woody; the Leaves are four times winged; and eyelaſhed.

This is a Perennial, native of the Iſland of Ternate; a little woody Plant of two foot high; branchy and ſpreading. The Stem is of a deep brown; the young Shoots are olive-coloured. The Leaves are of a freſh green; and the Flowers are white.

AGGREGATES.

ORDER II.

Whoſe particular Cup is entire, but folded at the Edge or Brim.

GENUS I.

THRIFT.

STATICE.

Character of the Genus.

The Head is globular, and compoſed of many Flowers. The general Cup is til'd with broad Scales; the Flower is compoſed of five Petals; and the ſeparate Cup is membranaceous toward the Rim.

Plate 13. o. *a b c d.*

1. LINEAR THRIFT.

Plate 13. Fig. 1.

Character of the Species. Statice Armeria.

The Leaves are linear; the Stalk is round, and ſupports only one Head.

Fig. 1. *a b.*

THIS is a Perennial, native of our ſea coaſts in many Places; a very beautiful Plant, flowering in June. The Leaves are of a very fine graſs green. The Stalk is round, ſmooth, of a pale green, and eight Inches high. The Flowers are of a very beautiful crimſon.

THIS is one of thoſe Plants which we have termed univerſal, or common, in a manner, to every part of the earth. Beſide its moſt natural place of growth, the ſea coaſts, it is frequent on mountains; the Alps in Europe, and the Andes in America, afford it; and the ſea coaſts almoſt every where. Its aſpect varies as much as its place; on mountains the Stalk ſcarce riſes to a Finger's heighth; in ſalt marſhes it grows to ſeven or eight inches, and the Flowers are larger in proportion: for this reaſon, two or three Species have been made out of it by the leſs accurate writers, even while they overlooked ſuch as were truly diſtinct. I have received it from Cumberland Iſle, not an inch high, and with the head ſcarce ſo big as a large Pea; but the very ſame Plant has grown in my garden to the uſual ſtature. It is eaſily traced from the extreme North countries, down throughout North, and even South America, as we have mentioned of ſome other Plants.

2. LANCED THRIFT.

Plate 13. Fig. 2.

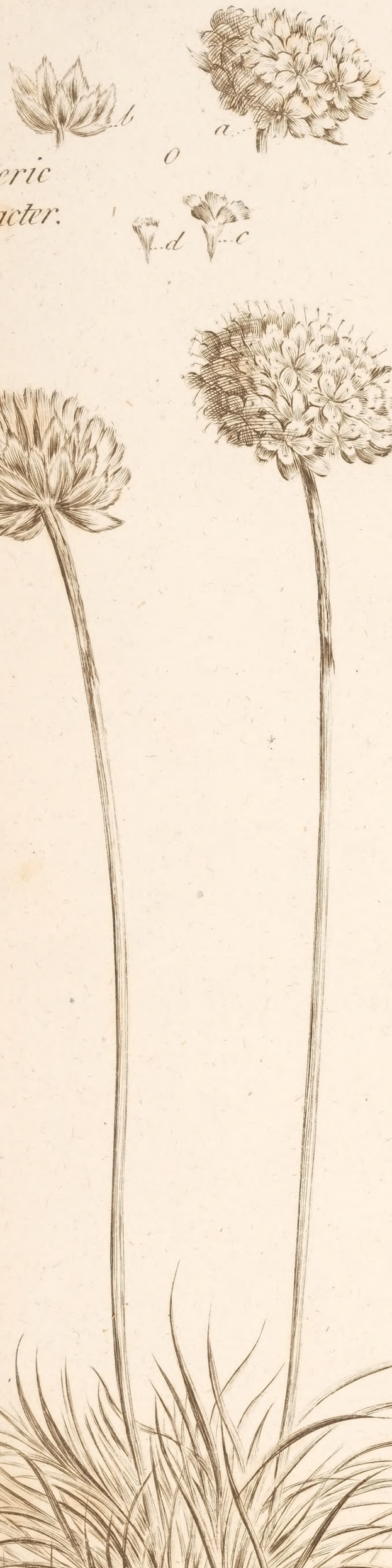
Character of the Species. Statice Specioſa.

The Leaves are lanced; the Stalk is two-edged and forked, and has ſome Films.

Fig. 2. *a b c.*

THIS

THRIFT. STATICE



THRIFT.

STATICE

2.

1

High rib'd Thrift.

a

b

2

Woody Thrift.

a

b

THIS is a Biennial, native of Ruſſia and China; a very handſome Plant, flowering in July and Auguſt. The Leaves are of a deep, but ſomewhat blueiſh green. The Stalk is ten inches high, pale and firm. It uſually divides into two branches in a forked manner, and each ſupports ſeveral heads of Flowers; theſe are large but pale, often white entirely.

3. HIGH RIB'D THRIFT.

Plate 14. Fig. 1.

Character of the Species. Statice Flexuoſa.

The Leaves are oblong, oval, obtuſe, and high rib'd; the Stalk is branch'd.

Fig. 1. *a b.*

THIS is a Perennial, native of Siberia; a very handſome Plant, flowering in September. The Leaves are of a very pale green, with high white ribs. The Stalk is whitiſh, weak, and about a foot high. The Flowers are of a very fine crimſon.

THIS Plant varies like the common Thrift in ſtature, and in the bigneſs of the heads. I have ſeen it from three inches to half a yard in heighth, and in ſome Plants the Heads are full as big as a Nutmeg, and perfectly regular; while in others, they are ſlight, ſmall, irregular, and divided. Soil and Situation do all this. They often change the aſpect of a Plant in ſome degree; but never affect its characteriſtic parts.

4. WOODY THRIFT.

Plate 14. Fig. 2.

Character of the Species. Statice Suffruticoſa.

The Stem is woody; the Leaves are lanc'd, round pointed, and embrace it at their Baſe.

Fig. 2. *a b.*

THIS is a Perennial, hard and woody Plant, native of the north of Europe and of Aſia; and flowers in Auguſt. It grows to two foot or more in heighth; the lower part of the Stem is brown and hard; the upper Branches are green and tender; the Leaves are of a very fine green; the Flowers are of a pale, but delicate crimſon.

IT has of late been a cuſtom to join the Thrift, and the Sea Lavender[i] together in one Genus, but they were always, till of late, divided; and we retain the old diſtinction: the diſpoſition of the Flowers demands it; and the character it gives, is plain and obvious.

[i] Limonium.

AGGREGATES.

ORDER III.

Whoſe particular Cup is ſimple; or cut into a ſingle ſeries or range of Segments.

GENUS I.

GLOBEWORT.

GLOBULARIA.

Character of the Genus.

The Head is globular, and thick ſet with Flowers. The general Cup is equal to the Flowers in length. Each ſeparate Flower is tubular at the Baſe, and cut into four Segments at the Rim; the upper one is ſhort, and turn'd back; the three others long, ſlender, and pointed.

Plate 15. o. *a b c.*

1. OVAL LEAVED GLOBEWORT.

Plate 15. Fig. 1.

BLUE DAISY.

Character of the Species. Globularia Vulgaris.

The Leaves from the Root are oval, and unarmed; thoſe on the Stalk are lanc'd, but not ſharp at the point.

Fig. 1. *a b.*

THIS is a Perennial, native of France, and other parts of Europe. It is moſt frequent about Montpelier, but is no where ſo perfectly fine in the Flower as near the Edges of the upland Foreſts in Germany. It flowers in May and June. The Leaves are of a deep and duſky green; the Stalk is five inches high, thick covered with ſmall Leaves of a deep colour alſo; the Flower is of a very beautiful blue.

2. PRICKLY GLOBEWORT.

Plate 15. Fig. 2.

Character of the Species. Globularia Spinoſa.

The Radical Leaves are broad, lanc'd and dented; and the point of every Tooth forms a Thorn: the Leaves on the Stalk are narrow and thorny.

Fig. 2. *a b.*

THIS is a Perennial, native of the mountainous parts of Spain, and flowers in June. The Leaves are of a ſtrong, but not pleaſing green; there is a tinge of a dirty blue in it. The Stalk is not more than four inches high; and its Leaves are like thoſe of the Root in colour, only a little paler; the Flower is of an exceeding beautiful blue; finer even than the former. It covers whole ſpots of many yards in ſome places, and makes a very beautiful appearance.

3. VARIOUS

GLOBEWORT. GLOBULARIA

Generic Character.

Oval leav'd Globenvort.

Prickly Globenvort.

GLOBEWORT. GLOBULARIA

Various-leav'd Globewort.

Heart-leav'd Globewort.

Wedge-leav'd Globewort.

3. VARIOUS LEAVED GLOBEWORT.

Plate 16. Fig. 1.

Character of the Species. HERB TERRIBLE. Globularia Alypum.

The Stalk is woody: ſome of the Leaves are ſimple lanced; others are divided into three Points at the End.

Fig. 1. *a b c.*

THIS is a woody Plant, native of the South of France, and common alſo in Spain and Italy. It grows to two feet high. The Bark is of a ſtrong coppery brown in its native places, which is a fine contraſt to the colour of the Leaves and Flowers; but is often loſt in gardens. The Leaves are of a very fine green; the Flowers of a beautiful blue. A great many of them are in perfection at once, on the ſeveral branches of the Shrub, in June: at which time, it makes a very beautiful appearance.

THIS is the Plant Authors call HERB TERRIBLE and GUTWORT, from a very harſh cathartic virtue in its Bark.

4. HEART LEAVED GLOBEWORT.

Plate 16. Fig. 2.

Character of the Species. Globularia Biſnagarca.

The lower Leaves are heart-ſhaped; but they are lanced toward the upper parts of the Stalks.

Fig. 2. *a b.*

THIS is a Perennial, a very beautiful Plant, common to Spain, and to ſome parts of Africa; it flowers in May. The Leaves are of a ſtrong, but ſomewhat yellowiſh green. The Stalk grows to two feet in heighth; and is brown and hard toward the Baſe, but green and tender upwards. The Flowers are large, and of a celeſtial blue.

5. WEDGE LEAVED GLOBEWORT.

Plate 16. Fig. 3.

Character of the Species. Globularia Cordifolia.

The Leaves are wedge-ſhaped; the End being broad, and divided into three parts, of which that in the middle is the leaſt.

Fig. 3. *a b.*

THIS is a Perennial, native of the Pyrenees, and of the Swiſs mountains; a low and very ſingular Plant; but far from wanting beauty: it flowers in July. The Leaves are of a coarſe green; the Runners or Offsets from the Roots, which lie upon the ground, are thick and brown. The Flower Stalk is ſlender and greeniſh, only a little brown at the baſe. The Flower is large, and of a delicate and fine azure.

6. NAKED GLOBEWORT.

Plate 17. Fig. 1.

Character of the Species. Globularia Nudicaulis.

The Leaves are lanced; the Flower Stalk is naked.

Fig. 1. *a b.*

THIS is a Perennial, native of the hills in Italy and Germany, but no where ſo abundant, or ſo beautiful as at the foot of the Pyrenees, where it often covers whole acres; as common and as hardy as our Daiſy, which, but for the fulneſs and ſky tint of its Flowers, it very much reſembles. The Leaves are of a deep and ſtrong green; and riſe in Cluſters like thoſe of our Daiſy. The Stalks are numerous, ſix inches high, ſlender and delicate; but of ſufficient ſtrength to bear the weight of the Flower, and of a ſtrong green. The Flower is large, and of the perfect colour of the clear firmament. It flowers in June. The firſt kind has been called Blue Daiſy, and Mountain Daiſy; but this much better deſerves the name, becauſe the Stalk is like that of our Daiſy, naturally and uſually naked; but this is not a certainty, for in luxuriant ſoils, there will grow now and then a Leaf upon it.

THIS may ſhew the neceſſity of taking in more parts than one, into the ſpecific character of a Plant; I remember to have obſerved the ſame thing in reſpect to ſome of the Hawkweeds; and that when I was new in theſe ſtudies, it perplexed me ſtrangely.

7. MANY FLOWERED GLOBEWORT.

Plate 17. Fig. 2.

Character of the Species. Globularia Orientalis.

The Leaves are oval revers'd; ſeveral Heads are placed along the Stalk, growing cloſe and without Footſtalks.

Fig. 2. *a b.*

THIS is a Perennial, native of Natolia, a very beautiful Plant, indeed the moſt elegant of this whole handſome family: it flowers in June. The Leaves are of a very fine graſs green, and have a gloſſy ſurface. The Stalk is near a foot in heighth, ſometimes tolerably thick ſet with Leaves, but in bad ground almoſt naked. The Flowers are perfectly globular, and are of a heavenly blue.

GLOBEWORT. 3

GLOBULARIA

Naked Globewort.

Many flower'd Globewort.

MASTERWEED. ASTRANTIA

Five leav'd Masterweed.

Seven leav'd Masterweed.

Generic Character.

GENUS II.

MASTERWEED.

ASTRANTIA.

Character of the Genus.

The Head is convex, looſe, and compoſed of many Flowers; the General Cup is longer than the Flowers. Each ſeparate Flower is formed of five Petals, which are a little ſplit, and turn back at the ends.

Plate 18. 2. *a b c.*

1. FIVE LEAVED MASTERWEED.

Plate 18. Fig. 1.

Character of the Species. Aſtrantia Major.

The Leaves are formed each of five large Lobes, divided nearly to the Baſe; and each Lobe terminates in three Points.

Fig. 1. *a b.*

THIS is a Perennial, native of the Apennines, and other mountains throughout the greateſt part of Europe, but not of our country; a very ſingular, and not unhandſome Plant, of a foot or a little more in heighth, flowering in July. The Stalk is rib'd upright; and of a pale green. The Leaves are of a very ſtrong and fine green. The Flowers are of a greeniſh white. There is a tinge of crimſon always ſeen among them; this is from their Footſtalks, which are of that colour. The general Cup is of a greeniſh white, and has, in ſome degree, the aſpect of a Flower.

2. SEVEN LEAVED MASTERWEED.

Plate 18. Fig. 2.

Character of the Species. Aſtrantia Minor.

The Leaves are formed each of ſeven Lobes, cut almoſt to the Baſe; and each Lobe is entire, only ſaw'd at the Edge, and ends ſingly.

Fig. 2. *a b.*

THIS is a Perennial, native of the mountains of Switzerland, a Plant of little beauty, but ſingular in a high degree. The Stalk is ſingle, and about ſeven inches high; the Leaves are of a bright green; the Flowers are white. It blows in Auguſt.

IN each of theſe Plants there are male and female Flowers in the ſame general Head. The Female are placed with their Cups on the top of the Rudiments of the Seeds; the Male on naked Footſtalks. See o. *c d.*

IT has been cuſtomary to range the Aſtrantia among the Umbelliferous Plants; but the impropriety of this we have ſhewn [1].

[1] See Page 4, and the ſucceeding.

GENUS

GENUS III.

GRASS-WEED.

AGROSTANA.

BUPLEARUM LINNÆI.

Character of the Genus.

The Head is flat and looſe; the Cup extends every way beyond the Flowers; and is of one piece, only dented lightly in five places at the Rim.

Plate 18. o. *a b c.*

Of this Genus we know only one Species.

1. YELLOW GRASS-WEED.

Plate 19.

Character of the Genus.

The Leaves are nearly linear, but ſwell a little into breadth in the middle. The Cup has a little Point at the centre of each diviſion.

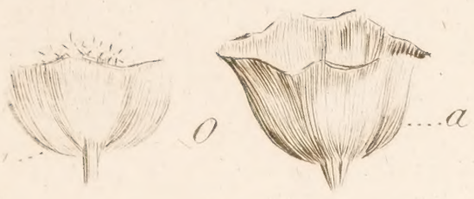
Plate 19. *a b.*

THIS is a Perennial, native of Switzerland, and of ſome parts of Italy; a very pretty looking Plant, flowering in July and Auguſt. The Stalk is pale, firm, and not much branched: it riſes to a foot and a half high in good ground; though in ſome places not to more than ſix or eight inches. The Leaves are a foot long or more; they are of a ſtrong, but ſomewhat yellowiſh green on the upper ſide, and paler underneath; and as they riſe in vaſt cluſters from the Root, and remain all the year, they for a very conſiderable part of that time, have perfectly the look of Graſs. The Flowers are ſmall and yellow: their general Cup is by much the moſt conſpicuous part; and itſelf, in ſome degree, reſembles a large whitiſh Flower; in which at any diſtance, the ſeparate Flowers ſeem only as a cluſter of yellow Filaments.

THOUGH the name be new, the Plant is not altogether ſo; the accurate Haller plainly and certainly knew it. He and Linnæus both, have thought that it is one of Bauhine and Ray's Beupleurums; but if their accounts of that Plant[k] are fairly compared with this, it will, I think, be found otherwiſe.

[k] Perfoliata Alpina anguſtifolia media.

GRASS-WEED. AGROSTANA



Generic

Character.

Yellow
Grass-weed.

BEAR-WEED. ARCTOPUS

Generic Character.

Male Flowers.

Starry Bear-weed.

GENUS IV.

BEARWEED.

ARCTOPUS.

Character of the Genus.

The Head is flat, and compoſed of many Flowers without Footſtalks. The general Cup is larger than the Head, formed of one piece, divided into four parts, and thorny at the Edge.

Plate 20. o. *a b.*

THIS is the character of the female or ſeed-bearing Plants: there are barren or male Plants of the ſame Species, in which the Flowers have Footſtalks; and the general Cup is equal to them in length, and formed of five Leaves.

Plate 20. 2.

Of this Genus we know but one Species.

STARRY BEARWEED.

Plate 20.

Character of the Species. Arctopus Echinatus.

The Leaves are fringed with yellow Threads; and armed on the ſurface with ſtarry Thorns.

Plate 20. *a b.*

THIS is a Perennial, native of the Cape of Good Hope; a moſt ſingular Plant, ragged as it were, and fringed and covered with a kind of native horribleneſs, not found in any other Plant. It lies upon the ground, unleſs that in ſome circumſtances a part of its rough and thick black Root, thruſts itſelf up above the ſurface; and bears up the reſt of the Plant like a Cabbage on its rooty Stem.

THE Leaves are of a deep and very ſtrong green; their Edges only have a yellowiſh tinge; and the ſtarry Thorns which grow upon their ſurface, are alſo yellow, bright, and ſhining. The Flowers are white, and the Cup which holds them is of a reddiſh green, and has a peculiar redneſs in the Thorns.

ALTHOUGH there are diſtinct male Plants of the Bearweed; there are alſo male Flowers in the ſame general Cup with the others on theſe Plants. The male Flowers occupy the Diſk of the Cup; the female are only four; they ſtand at the verge at a diſtance from one another; and in the baſe, as it were, of the Spine that terminates each diviſion.

WE owe the firſt knowledge of this ſingular Plant to Plukenet; but it is to Burman we are indebted for its characters.

THE Cup of the Dorſtenia will appear leſs wonderful when we have ſeen that of this Plant; which is nearly as much a Placenta.

GENUS V.

THORNWEED.

ECHINOPHORA.

Character of the Genus.

The Head is flat, and compoſed of ſeveral Flowers without Footſtalks. The general Cup is longer than the Flowers; it is formed of one piece oblong, ſlender at the bottom, expanded at the Top, and ſlightly cut there into ſix irregular parts.

Plate 21. o. *a b c.*

1. FLESHY THORNWEED.

Plate 21. Fig. 1.

PRICKLY SAMPIRE.
Echinophora Spinoſa.

Character of the Species.

The Leaves are fleſhy and pinnatifid; and the Segments are thorny at the Points.

THIS is a Perennial, native of the ſea-coaſts of moſt parts of Europe, our own not excepted; and flowers in June; a very ſpecious, and exceedingly ſingular Plant. It grows to half a yard high, but uſually leans in part upon the ground. The Stem is thick, firm, and almoſt woody, rib'd and jointed in a very ſtriking manner. Its colour is uſually browniſh toward the baſe, but elſewhere of a blueiſh green. The Leaves are fleſhy and firm; they are alſo of a blueiſh green, but their points are darker. The Flowers are white, but with a bluſh of crimſon, and ſometimes of yellow.

2. THIN LEAVED THORNWEED.

Plate 21. Fig. 2.

Character of the Species.

Echinophora Tenuifolia.

The Leaves are recompound, thin, and divided at the Ends into unarmed Segments.

Fig. 2. *a b.*

THIS is a Perennial, native of Italy; principally upon the open ſea-coaſts; a freſh looking Plant; flowering in July and Auguſt. It grows to two feet high. The Stalk is tender, and of a duſky green. The Leaves are ſomewhat thick, but not in the leaſt like the former: Their colour is a yellowiſh green; but the nearer the ſea the Plant grows, the more and more they become of a blueiſh tint. The Flowers are yellow: and the general Cup is always paler than the reſt of the Plant.

THORN-WEED. ECHINOPHORA

Generic Character.

Flashy Thorn-weed.

Thin leav'd Thorn-weed.

EGG WEED. GUNDELIA

a

b

Generic Character.

a

b

Thorny Egg weed.

GENUS VI.

EGGWEED.

GUNDELIA.

Character of the Genus.

The Head is egg-ſhaped. The general Cup is leafy, and ſhorter than the Head, and is defended by a circlet of perfect Leaves beneath.

Plate 22. o. *a b c.*

Of this Genus we know only one Species.

THORNY EGGWEED.

Plate 22.

Character of the Species. Gundelia Tournofertii.

The Leaves are pinnatifid, and their Edges thorny.

Fig. 22. *a b.*

THIS is a Biennial, native of Syria and Armenia; a moſt ſingular and elegant Plant, flowering in June. It grows to a foot and a half high. The Stalk is thick, firm, and high rib'd, of a reddiſh brown, and not much branched. The Leaves are of a ſtrong and fine green on the upper ſide, and paler underneath; and they are edged with tolerably firm Thorns of the colour of the Stalk. The Flowers are crimſon; and the whole Head, though white at firſt, acquires by degrees that colour.

THIS Plant, in the order of nature, joins Dipſacus and Eryngium; and ſhews how little regard in the true arrangement of Plants, is to be paid to the diſtinctions of artificial Claſſes.

HERE it is neceſſary to place the Plants together under arbitrary ſchemes; and though we know that the nearer they ſtand to the juſt order of nature, the better, yet we cannot but often divide them. We have ſaid in the Introduction to this our artificial method, that it is deſtined to the mere knowledge of Plants as we ſee them; and that in the purſuit of it, we ſhall have no mercy on any Claſs, Order [m], or Genus that would ſtop our courſe. The reader has here an inſtance: while we acknowledge that this Plant in the method of nature, has its juſt place between Teaſell and Eryngium; we give it under an Order different from either, and near Plants it does not belong to; becauſe the ſeparate Cup of its Flower is of a different conſtruction; and it is by that the ſtudent is to know how, and where to find the Plant: we ſhall ſhew him afterwards, according to this hint, where to place it.

[m] Vol. II. Page 44.

GENUS

GENUS VII.

SHEEPS RAMPION.

JASIONE.

Character of the Genus.

The Head is globular; the general Cup is formed of two ranges of Scales; the one erect, the other dependent, and properly a fringe.

Of this Genus we know but one Species.

HAIRY SHEEPS RAMPION.

Plate 23. Fig. 1.

SHEEPS RAMPION.
Jasione Montana.

Character of the Species.

The Leaves are linear, and slightly serrated.

Plate 23. *a.*

THIS is an annual, native of dry hilly pastures, and common to England, and most other parts of Europe; a very handsome Plant. It grows to a foot or a little more in heighth; the Stalk is slender and weak; pale, and a little hairy. The Leaves are of a pale and browniſh, or greyiſh green. The Flowers are of a celeſtial blue, large and very beautiful. It flowers in June. It is common about the farther edge of Hampſtead Heath, near the Spaniard's; and in many other Places in duſty cloſes, and by the ſides of roads: but it is in gardens only that it appears in its full and proper luſtre; the cluſter of Flowers detains the duſt, and we ſee little of their elegance, unleſs where they are kept in cleanly places.

THIS Plant is altogether ſingular. It not only conſtitutes a Genus of itſelf, of which there is no other Species; but is properly of no Claſs, natural or artificial. It is one of thoſe which writers uſually call Anomalous; but in the higher views of Botany; it is one of the Intermediate or Connecting Plants. It has partly the character of the Tubulate or naked flowered Claſs, for its Chives cohere; and partly of this of Aggregates, for each Flower is perfect, and has its proper Cup. Therefore in the order of nature, it leads from one of theſe Claſſes to the other; fills up an imagined gap between Claſs and Claſs in artificial methods, and joins the two, by deſtroying the diſtinction. *The Union of its Chives*, obliged us to give a figure of it before at the end of the ſecond Claſs [n], together with ſome other ſingular and connecting Plants, for it claimed thereby that character; here we repeat it more at large, as in its more proper place, according to our plan [o], for the union of its Chives is ſlight and imperfect, but its ſeparate Cup is perfect and entire.

[n] Vol. III. Page 145.

[o] Vol. II. Page 43.

ORDER

SHEEPS RAMPION. JASIONE

Generic Character.

Hairy Sheeps Rampion.

1

a

SCABIOUS. SCABIOSA

a

o

Generic Character.

a

o

a

l

l

Tol. 5.

Harsh Scabious.

ORDER IV.

Whoſe particular Cup is double; or has two Ranges of Segments.

GENUS I.

SCABIOUS.

SCABIOSA.

Character of the Genus.

The Head is convex, and the general Cup is compoſed of ſeveral Ranges of leafy Scales.

Plate 24. o. *o a b.*

1. HARSH SCABIOUS.

Plate 24. Fig. 1.

COMMON SCABIOUS.

Character of the Species. Scabioſa Arvenſis.

The Plant is covered with long firm Hairs which feel harſh; the Flowers ſpread, and form a broad open Verge.

Fig. 1. *a b.*

THIS is a Biennial, native of our Corn-Fields, and flowers in July; a ſtately handſome Plant, that would be thought an ornament in gardens, were it not found in fields. It grows to two feet and a half in heighth. The Stalk is pale and branched. The Leaves are of a light, but pleaſing green; and the Flowers are large, and of a very delicate pale crimſon.

THIS Plant ſtands at the Head of a very large Genus, of which I am afraid all are not genuine Species which are honoured with that name. It is evident, that but the laſt year, I had at Bayſwater, a Plant of the mongrel or mixt kind, between the Eryngium Planum, and this common Scabious; and I ſuſpect extremely, that the Syrian Scabious has the Paſtoria, or little Teaſell for one of its parents: perhaps there are ſome others that ſhould be marked with the ſame character, which experience and ſtrict obſervation will ſhew.

THIS common Scabious, is a Plant of very conſiderable virtue, but at this time much neglected. Chymical medicines have taken, in too great a degree, the place of often more effectual, and always more innocent preparations from Plants. What I perſonally know of the virtues of this, is worthy to be known by all. I have cured aſthmas, with a ſyrup of Scabious made with honey: and terribly ulcerated legs, with a pultice of the Leaves of Scabious, boiled to ſoftneſs.

2. LANC'D LEAV'D SCABIOUS.

Plate 25. Fig. 1.

DEVILSBIT SCABIOUS.

Character of the Species. Scabiosa Succisa.

The Leaves are broad, simple, lanc'd, and serrated at the edges.

Fig. 1. *a b.*

THIS is a Perennial, native of our dry Pastures; and flowers in July. It grows to two feet or more in heighth; but the Stalk naturally leans, in part, toward the ground. The branches are few and ascendant; the Leaves are of a very deep and strong green; as is also the Stalk, except that on the sunny side 'tis often purplish. The Flowers are of a very deep and beautiful blue.

THIS Plant is said to have the virtues of the preceding in medicine; and fanciful writers have given it their name of Devilsbit, because as they or the grandmothers fancied the Devil bit off its Roots, envying their virtues to mankind. The Plant has an abrupt Root, as have some of the Hawkweeds; one of which has also had the same English and Latin name for the same reason; and many other Plants. With respect to its virtues, I think it is inferior to the former; but some of the northern nations have found that it is excellent in dying; and it were well if we, who with all our boasted improvements in the arts are very deficient in that, would cultivate the thought. Perhaps this innocent Weed would yield a green more elegant and lasting, than that we fought to make with Arsenic after the Saxons.

3. DROOPING SCABIOUS.

Plate 25. Fig. 2.

Character of the Species. Scabiosa Alpina.

The Flowers droop: the Leaves are deeply pinnatifid; and the Segments serrated.

Fig. 2. *a b.*

THIS is a Perennial, native of the Swiss mountains, and of many parts of Italy: a Plant of two feet and a half high; flowering in June. The Leaves are of a very strong, but somewhat blueish green. The Stalk is of a deep green; soft and tender. The Flowers are of a very deep blue. The Stalk, just under the Flowers, swells a little and turns, hanging the Flower a little drooping.

4. HARP'D

SCABIOUS. SCABIOSA

2

Lanc'd Scabious.

Drooping Scabious.

SCABIOUS. 3.

SCABIOSA

Harpi'd Scabious.

Snowy Scabious.

4. HARP'D SCABIOUS.

Plate 26. Fig. 1.

Character of the Species. Scabiosa Transylvanica.

The lower Leaves are harp'd; but the upper ones simply pinnatifid: the separate Flowers are short, and stand low.

Fig. 1. *a b c.*

THIS is an Annual, native of Transylvania; a tall and very handsome Plant, flowering through all the middle part of Summer; and very worthy a place in gardens. The Stalk is firm, erect, thick jointed, and above a yard high. The Leaves are of a faint, but delicate green; and are a little hairy. The Flowers are of a very fine rose colour. They stand much more regularly on the top of the Plant, than in many of the other kinds; and this adds a great deal to their beauty.

5. SNOWY SCABIOUS.

Plate 26. Fig. 2.

Character of the Species. Scabiosa Leucanthema.

The Leaves are irregularly pinnatifid: The Flowers are globular and compact.

Fig. 2. *a b.*

THIS is a Perennial, native of the South of France; a Plant of very singular aspect, flowering in July and August. The Stalk is brown, and woody at the base; the upper part is pale and tender; and its Branches fall wildly, not with that regularity we see in many of the Scabious's. The Leaves are of a whitish green; and have a glossy surface. The Flowers are snow white.

IT is singular that this Plant, evidently the same species, is found at the Cape of Good Hope, where its Stalk is much more woody, and its Leaves lose much of their division. These variations, though they seem great, yet are reduced to nothing, when we examine into their causes. The Cape Plants have often woody Stems, because the force of winter does not destroy them; and even with us, a high or low ground, give more or less divisions to the Leaves. The first is an article of consequence in the history of Plants, because unless understood, many herbaceous Plants will be confounded with Shrubs; but the cause is familiarized to us by good observation here. Last winter being a very mild one, many of the Musk Scabiouses lived through it; and have now woody Stems.

6. FORKED

6. FORKED SCABIOUS.

Plate 27. Fig. 1.

Character of the Species. Scabiosa Syriaca.

The Stalk splits in a forked manner; the Leaves are lanc'd, and deeply serrated, especially toward the base.

Fig. 1. *a b.*

THIS is an Annual, native of Syria, and many other warm parts of the globe; but is no where so plentiful as about Aleppo; though this is not always, but in certain years, for sometimes in the same places, which were before in a manner covered with it, there is scarce a Plant to be seen: the cause of which will be considered. The Plant is a yard and a half high, very beautiful, and lasts many months in flower. The Stalk is ridged, erect and robust, of a pale green, and always rises unbranched for some heighth above the ground. The proper summit of it is terminated by a Flower, a little below which, rise two Branches in a forked manner; and each of these terminating at the Stem give the same forked aspect to the whole upper part of the Plant, with a Flower on a short Footstalk in the division.

THE Leaves are of a pale, and very delicate green; the Flowers are of a perfectly cœlestial blue: though they will vary from this, and sometimes be white.

THE aspect and habit of this Plant, and the extreme uncertainty of finding it in the same place; together with the free growth of the Seeds with us at some times; and their perfect failing at others, though seeming very good and sound, give me a suspicion that the Plant is not a genuine species, but is produced between the Shepherd's Rod and some one of the Scabious's. The habit more resembles the Shepherd's Rod than the Scabious, but is truly of a kind between them. The Leaves have much of the Shepherd's Rod form; and their deep division toward the base, seems an attempt toward the distinct appendages of that Plant: neither does the form of the general Flower deny this alliance. There is in this case less wonder that the Seeds fail often; than that they sometimes grow.

WE shall have an opportunity of enquiring farther into the doctrine of Mulish Plants, at the end of this Genus.

7. HOLLOW'D

SCABIOUS. SCABIOSA

4

Forkid Scabious.

SCABIOUS. SCABIOSA

5.

Spreading Scabious.

Hollow'd Scabious.

7. HOLLOW'D SCABIOUS.

Plate 28. Fig. 1.

Character of the Species. Scabiosa Tartarica.

The Leaves are lanc'd and deeply saw'd; the lower ones are lightly pinnatifid; and their Segments turn in, and make the Leaf hollow.

Fig. 1. *a b.*

THIS is a Biennial, native of Tartary, and flowers in July; a very tall, stately, and handsome Plant. The Stalk is five feet high, thick, and very upright and robust; the Branches are also coarse and strong, and all covered with that sort of hairyness, which gives the harshness our Scabious has to the touch. The Leaves are rugged, and of coarse green. The Flowers are very large, and of a fine light crimson when first blown; but they grow paler with standing, and get a very faint look as they fade.

8. SPREADING SCABIOUS.

Plate 28. Fig. 2.

Character of the Species. Scabiosa Integrifolia.

The Stalk is smooth, and spreads at the top with wide Branches; the Leaves are lanc'd, dented at the edge, and hairy.

Fig. 2. *a b.*

THIS is an Annual, native of the South of France; and flowers in June. The Stalk is firm, of a dusky green, and two feet high. It rises single, and sends out few Branches till near the top, where it divides and spreads into a wide head; unlike in this respect to any other of the Scabiouses; the Flowers are small, and the Heads globular. Their colour is a singular crimson, having some faint dash of a tint approaching to blue, that plays in an uncertain manner upon the Buds; but is not seen in the open Flowers.

THE divisions of the Flower, in this and the preceding species, are less irregular than in many of the others. The Scabious Genus is so large, that I have wished to form a distinction upon this foundation; but near examination shews the difference is only in the degree of irregularity, for all are more or less irregular; and therefore I have found it impracticable.

9. FINE LEAV'D SCABIOUS.

Plate 29. Fig. 1.

Character of the Species. — Scabiosa Columbaria.

The first Leaves are simple, oval, and bluntly dented along the Edges. The others are deeply pinnatifid and serrated; and those on the upper part of the Stalk, most fine and simple in their divisions.

Fig. 1. *a b.*

THIS is a Biennial, native of our hilly pastures, a very beautiful, though wild Plant, flowering in June, July, and August. It grows to near a yard in heighth; the Stalk is delicate, but firm; of a pale green, and not much branched; the Leaves are of a pale green also; and from the fineness and regularity of their divisions, have a beautiful aspect. The Flowers are of a fine crimson, with a dash of pearly blue. They vary exceedingly in size, form and colour, according to the places where the Plant grows. It loves a light soil; but light soils are usually dry; and in these the heads are small and globular, and the Flowers open very imperfectly: the Plant requires to its perfect good condition, some moisture in the light and loose ground, wherein it delights to grow. In this the Flowers obtain their full size, and spread into a breadth that is surprising; here also they have their fine crimson colour. I found the Plant in this fine state near Hornsey Wood; and giving it the same soil, it blows in the same perfection here at Bayswater.

10. PURPLE SCABIOUS.

Plate 29. Fig. 2.

Character of the Species. — MUSK SCABIOUS. Scabiosa Atropurpurea.

The lower Leaves are pinnatifid with a broad harp'd end; the others are simply pinnatifid, with long slender Segments.

Fig. 2. *a b.*

THIS is an Annual, native of the East-Indies, a Plant of two feet and a half high, covered with Flowers in July, whose fine deep colour, and perfumed scent, have long made it a favourite in our gardens. Though an Annual with us, it is a Perennial, woody Plant in its native soil, as are many others; and it will live through mild winters, and become woody also sometimes with us. The Stalks are brown toward the base, but of a good green upwards. The Leaves are of a bright green. The Flowers are purple, dotted as it were with their own white styles.

11. SILVERY

SCABIOUS. SCABIOSA

6

Fine leav'd Scabious. *Purple Scabious.*

SCABIOUS 7. SCABIOSA

Silvery Scabious.

Woody Scabious.

11. SILVERY SCABIOUS.

Plate 30. Fig. 1.

Character of the Species.

Scabiosa Argentea.

The lower Leaves are pinnatifid; the upper ones are only dented irregularly, and that most near the point.

Fig. 1. *a b.*

THIS is a Perennial, native of the Greek islands, a very beautiful Plant, flowering all the summer. It grows to near a yard in heighth, and branches wildly and irregularly; the Stalk is glossy, firm, and white. I should say Vaillant had hit upon a lucky thought in likening it to ivory, but that, with me at least, it is usually stain'd a little with crimson. The Leaves are of a delicate silvery white; the Flowers are of a very pale crimson. Sometimes they are small and very red, at other times they spread out into a great breadth, and get a great deal of a blueish tinge; this latter state is commonly the effect of a too close green-house culture. The Plant will stand very well in the open air, and it is there it gets the true middle size, and strong glowing colour of its Flowers, in which case it is so very much superior to the sickly, spread out, blueish aspect of the green-house; and the starved condition that it sometimes has in a tough soil abroad, that it is scarce like the same Plant.

12. WOODY SCABIOUS.

Plate 30. Fig. 2.

Character of the Species.

Scabiosa Africana.

The Stalk is woody; and the Leaves have a few deep and irregular Segments.

Fig. 2. *a b.*

THIS is a Perennial, native of Africa, a wild and irregular growing Plant, but very beautiful, flowering in July and August. The Stem is woody, and two feet high; the lower part is covered with a brown bark; the young Shoots are tender, and of a whitish green. The Leaves are of a light green; the Flowers are numerous, large, and of a delicate pale crimson. If this Plant be managed with care, by cutting off the faded Flowers, and allowing it water regularly, it will be covered with bloom all summer. The Seeds may be spar'd, for they seldom ripen here; and the Plant is so easily propagated by Cuttings that we need not save the Flowers for that uncertain purpose.

13. YELLOW

13. YELLOW SCABIOUS.

Plate 31. Fig. 1.

Character of the Species. Scabiosa Ochroleuca.

The Leaves are doubly pinnatifid; and their Segments sharp pointed.

Fig. 1. *a b.*

THIS is a Perennial, native of Germany, and other parts of Europe; a Plant singular in the division of its Leaf, and colour of its Flower, but yet a true and genuine Scabious, flowering in July and August. The Stalk is thick, firm, branched, and two feet high. The Leaves are sharply and elegantly divided; their colour is a strong green; and they are firm to the touch. The Flowers are yellow; they are very numerous on the Plant, and open in a long succession, but their colour is by no means pleasing; it is a dusky, though not strong yellow; and soon becomes paler and fainter as the Flowers continue open.

14. VARIOUS LEAV'D SCABIOUS.

Plate 31. Fig. 2.

Character of the Species. Scabiosa Maritima.

The upper Leaves are linear, narrow, and undivided; the others are very deeply pinnatifid, with indented Segments.

Fig. 2. *a b.*

THIS is a Biennial, native of the sea-coasts of Spain and Portugal, a tall and handsome Plant, flowering in June. The Stalk is thick but weak; of a strong green, and not much branched. The Leaves are of a fresh and fine green; the Flowers are crimson; they are large and numerous, and last longer upon the Plant than in most of the other Scabious kinds; and for that reason render it desirable in gardens.

IN dry seasons, and very dry soils, the Flowers of this Plant will be perfectly white; and they are then very beautiful; perhaps indeed more so than when of their native colour. Several of the other species will have their Flowers pale, when they are ill nourished, but unless the white be perfect and lively, they never look well in that condition.

I HAD last year an elegant variety of this Plant with the Stalk Proliferous; several Footstalks of new Flowers growing from the back of the Cup of the first which rested sessile on the Stalk. To one unaccustomed to the variations of the Scabious kinds, it would have seemed a new Plant. See Plate 30. Fig. 3.

SCABIOSA SCABIOUS.

8

a

2×

Proliferous Variety.

Various leav'd Scabious.

Yellow Scabious.

SCABIOUS. SCABIOSA

9

Grassy Scabious.

Eyelash'd Scabious.

15. EYELASH'D SCABIOUS.

Plate 32. Fig. 1.

Character of the Species. Scabiosa Uctanica.

The lower Leaves are pinnatifid; the upper ones are perfectly simple and linear; and are eyelash'd near the base.

Fig. 1. *a b.*

THIS is a Biennial, native of Tartary and China, a tall, singular, and not inelegant Plant, flowering in August. The Stalk is slender, upright, not much branched, and of a full and fresh green. It is weak but tough, so that it plays about in the wind without breaking, and offers its numerous Flowers to view in various ways, and in a very pleasing manner. The Leaves are of a fresh and pleasant green; the hairs which form the Eyelash at the base of the upper ones, are harsh and firm; and give that part of the Plant the same harshness to the touch that we feel in the common Scabious of our fields. The Flowers are of a light crimson; the Heads are not so large as in some of our common Scabiouses; but the colour and number of the Flowers, make good amends for that deficiency.

16. GRASSY SCABIOUS.

Plate 32. Fig. 2.

Character of the Species: Scabiosa Graminifolia.

All the Leaves are linear; but a little swelling in the middle.

Fig. 2. *a.*

THIS is a Biennial, native of Germany, a low Plant, singular enough, but of no great beauty, flowering early in July. The Stalk is weak, tender and bowing, for the Flowers are large; its colour is brown at the base, elsewhere green. The Leaves are of a fresh and fine green; and have so much of a grassy look, that, unless when the Plant is in flower, or in bud rather, for then the colour is much more glowing; it is not readily distinguished from the grass, among which it usually grows. The Flowers are of a bright and fine crimson. This Plant, when entire, would look very like a branch of the former, only that the Leaves have nothing of that eyelashed hairyness at their base.

17. RUGGED SCABIOUS.

Plate 33.

Scabiosa Lanata.

Character of the Species.

The Leaves are oval, and covered with a rough woolly matter.

Plate 33. *a b.*

THIS is a Perennial, native of the Cape of Good Hope, unlike in appearance to most of the Cape Plants, but of a rough and robust aspect, which to the curious eye, surpasses beauty. To describe it, will be to say, that it has neither form nor colour, delicacy nor simplicity; but to look upon it, is to be astonished; and whoever sees it, knows there is something in the aspect of a Plant superior to beauty.

IT rises to little more than a foot in heighth; and though its Stalk is extreamly thick and strong, it always leans, and often lies upon the ground entirely. The Leaves are thick and fleshy, of a blackish green on the upper side, and white on the under; but on both covered thick with a long curly, heavy, cottony matter, scattered wildly, and as it were, irregularly over them. The two sides of the Leaf are a fine contrast to one another; and they are usually seen more or less in every Leaf together, for the sides toward the base are naturally turned in, and drawn up; and most in the youngest.

THE Stalk is tough and spungy, and is covered thicker than the Leaves with this white frizzled matter: we know the singular harshness there is upon the Stalks and Leaves of the Scabious of our corn fields: but this is soft and woolly, it gives way to pressure, and has a wonderful yielding to the touch, but rises again presently to its usual form. The Branches are few; the filmy Leaves upon them are white entirely. The Flowers are very large and green, but with a slight tinge of yellowish. Their Cups have the same woolly whiteness with the Leaves; and this gives a pleasing contrast to the colour of the Flowers. They blow in August.

IT does not seem that any of the writers on Botany have known this Plant, except Burman; and with him it appears in a degree of eminence and singularity, beyond what I have seen: the Flowers on his Plant were proliferous; on mine they are simple; but 'tis a luxuriance to which the Scabiouses are not absolutely strangers, as we shall see in the succeeding species, even in their wild state: and culture gives this condition sometimes in a high degree, even to the Musk Scabious.

Rugged Scabious.

SCABIOUS. SCABIOSA

11

Proliferous Scabious.

18. PROLIFEROUS SCABIOUS.

Plate 34.

Character of the Species. Scabiosa Prolifera.

The Leaves are broad lanc'd; the Stalk is proliferous.

Plate 34. *a b.*

THIS is a Biennial, native of China and India, a low, but exceedingly ſingular Plant, flowering in July. The Stalk is firm, hard, and brown, almoſt woody at the baſe. It does not exceed ſix or ſeven inches in heighth, and a part even of that lies upon the ground; the bottom is brown with ſome tinge of red; the reſt greeniſh with white hairs; theſe are rough and rugged, and give it the ſame harſhneſs to the touch, that we find in the common Scabious of our corn fields.

THE Leaves are of a pale, and but unpleaſing green. The Flowers are of a very pale yellow: the outer ranges of theſe in every Head are ſo much larger, and more divided than the reſt, that in ſome views, one would ſuppoſe the whole Head only a ſingle Flower.

THIS is not conſtant or certain in this Plant, at leaſt not in degree; and it obtains more or leſs in many other of the Scabious kinds. When this grows in a dry ſoil, and fully expoſed to the ſun, the outer Flowers do not exceed the inner ones, more than in the common Scabious; but they are always much more irregularly divided; on the other hand, Plants from the ſame parcel of Seeds, raiſed in a moiſt place, under ſome degree of ſhade, have ſpread out here their outer Flowers to a degree much exceeding what is ſhewn in this figure. The ſame ſituation and accidents will wonderfully alter the Flowers, eſpecially the outer ones, of many of the common kinds; and I have ſeen ſuch difference between the Green-houſe Plants, and thoſe of the open air, in the ſame ſpecies, as would make ſome think the objects too vague for deſcription, or for figure; moderation in our accounts and repreſentations is the rule of being right; and there always remain parts enough that are unchangeable to aſcertain the character.

19. ENTIRE

19. ENTIRE LEAV'D STARRY SCABIOUS.

Plate 35. Fig. 1.

Scabiosa Cretica.

Character of the Species.

The Leaves are lanc'd and undivided; the Seeds have ſtarry crowns.

Fig. 1. *a b.*

THIS is a Perennial, native of Crete; and other of the Greek Iſlands: a Plant of very agreeable aſpect, that bears the free air with us perfectly well; and flowers as gaily as if on its native land, in July and Auguſt.

IT grows to two feet and a half high; the Stem is woody at the bottom, and there of a browniſh hue; higher up it is tender, and of a pale grey. The Leaves are of a greyiſh or whitiſh green; they are naturally quite entire, and even at the edge; but ſometimes where the Plant has very luxuriant nouriſhment, they are wavy, and in a manner indented. The Flowers are of a pale and delicate crimſon: they vary much in ſize, according to the ſeaſon, or to the degree of the culture they receive, as is the caſe in many of the other Scabiouſes. And in general, when they are largeſt they are paleſt; and when ſmalleſt, of the ſtrongeſt colour.

THE Flowers are not the only production of this Plant, for which it is, and deſerves to be eſteemed in gardens; they are handſome enough, and the ſucceſſion of them is very laſting; but the Heads of Seeds that follow, have a ſtriking aſpect; and to thoſe who eſteem ſingularity as beauty, they cannot but be very pleaſing; they are oval, and crown'd with a dry ſhining membranaceous cover, and five ſtarry threads.

THIS kind of ornament about the Seed, has led many to make a diviſion among the Species of this Genus, and to range ſuch as have it alone, under the diſtinct name Aſterocephali; but nature denies the exact limits between theſe and the common kinds; the aſcent toward this peculiar ſtructure, is by ſo light degrees, that none can ſay where it is perfect; therefore the diſtinction is omitted, not only here, but by the moſt correct authors beſide; for where the point of difference is not determinate, we confound inſtead of diſtinguiſhing when names are multiplied, and differences eſtabliſhed.

20*. PALÆSTINE SCABIOUS.

Plate 35. Fig. 2.

Scabioſa Palæſtina.

Character of the Species.

The Flowers have their Segments ſpread out and cut in threes at the point. The upper Leaves have a pinnatifid baſe.

Fig. 2. *a b.*

THIS is a Biennial, native of Palæſtine: a pretty Plant of a foot high; flowering in June. The Stalk is of a pale green; the Leaves are of a freſh ſtrong green; the Flowers are white.

20. DECUM-

SCABIOUS. SCABIOSA

12

Entire leav'd Starry Scabious.

SCABIOUS. SCABIOSA

13

Decumbent Scabious.

20. DECUMBENT STARRY SCABIOUS.

Plate 36. Fig. 1.

Character of the Species. Scabiosa Pterocephala.

The Stalk leans upon the ground; and is woody at the base. The Heads have extremely short and naked Footstalks.

Fig. 1. *a b.*

THIS is a Perennial, native of the Levant Islands, a low and very singular Plant, flowering from July to September. The Stalk is hard, rugged and woody near the base, but elsewhere tender and green; it grows only to six or eight inches in length; and for the most of that, it lies upon the ground. The Leaves are naturally of a fresh and fine green; but they are rendered grey by a multitude of long white hairs. The Flowers are of a bright, though not very strong crimson, and are large, though the Plant is low: the Heads of Seeds are very beautiful; they are dry, shining, brown and downy. The hairs which give that aspect are pale, and keep their place and form very regularly, though they have nothing of that firmness we find often among the hairs of the Scabious kinds.

21. FEATHERY SCABIOUS.

Plate 36. Fig. 2.

Character of the Species. Scabiosa Papposa.

The Cups of the separate Flowers are downy.

Fig. 2. *a b.*

THIS is a Biennial, native of Crete, and other of the Greek Islands; a handsome Plant of two feet high, flowering in August. The Stalk is tender to the bottom, upright, green, branched, and often very spreading. The Leaves are of a pale and greyish green: the Flowers are of a pale crimson. There is a white woolliness about the head of Flowers which gives the Plant an aspect different from all the others; it is owing to a peculiar light, and white hairy, or rather cottony matter that encircles the base of the separate Flowers, and arises from the Cup.

THIS has not the merit of so long continuance in flower as some of the other species of Scabious; but while in bloom, it is as beautiful as almost any of them.

22. PINNATIFID STARRY SCABIOUS.

Plate 37.

Character of the Species. Scabiosa Stellata.

The Leaves are deeply pinnatifid; and the Segments cut again.

Plate 37. *a b.*

THIS is an Annual, native of Spain, a very beautiful Plant, of two feet and a half in heighth, flowering in Auguſt. The Stalk is firm, thick jointed, of a pale green, upright, and not very much branched: the Shoots are aſcendant as in our Devilſbit Scabious, ſo that there is formed a very fine head to the Plant, with their numerous and large Flowers. The Leaves are of a pale, and ſomewhat greyiſh green. The Flowers are of a fine pale blueiſh crimſon; and the heads of Seeds, which have indeed little leſs beauty than the Flowers themſelves, are of a pale but ſhining brown. Theſe are very laſting, but the Flowers ſoon fade.

THE Flowers of this Plant are ſometimes redder than they are here deſcribed, and in that caſe, the general head is rounder and leſs ſpread at the edge. A Plant of this kind I received two years ago from Portugal, gathered at the edge of a vineyard, where it ſtood overſhaded: the Footſtalks of the Flowers were alſo longer than I had ſeen them; and the Plant, from all theſe circumſtances, had an aſpect ſo different from what is uſual, that one leſs accuſtomed to ſtrict obſervation, might eaſily have ſuppoſed it a diſtinct Species, and have boaſted to the world a new Plant. Perhaps many of the Scabious's deſcribed by leſs accurate authors, and which, from the uncertain deſcriptions, one knows not whither to refer, were of this kind: the differences in the ſame Species are ſo great, in reſpect to the ſize of the head, and length of the Footſtalk, that they give often a very different face to the particular Plants; but this appearance of diſtinction, when examined, vaniſhes into more or leſs, which affords no real difference, and the Plants are always to be diſtinctly known, for their ſpecific characters remain unaltered. I caution the young ſtudent particularly in this matter. Let him eſtabliſh in his mind a middle ſtate; and the extreams will not perplex him. I have endeavoured every where to give it in theſe figures; there are many of them whoſe Heads and Footſtalks I have new drawn ſix or eight times to hit the proper ſtandard.

SCABIOUS. 14 SCABIOSA

Pinnatifi'd Starry Scabious.

SCABIOUS 45 SCABIOSA

Multifi'd Scabious.

Isetense Scabious.

23. MULTIFID SCABIOUS.

Plate 38. Fig. 1.

Character of the Species. Scabiosa Triandra.

The Leaves from the Root are simple, oval, and serrated; those on the Stalk are divided into a multitude of very slender Segments.

Plate 38. Fig. 1. *a b.*

THIS is a Biennial, native of the South of France, a very singular, and very handsome Plant; flowering from June to August.

THE first Leaves are of a deep and very beautiful green; the Stalk is also of a strong green; and its Leaves only a little paler. The heighth of the Plant is about a foot, and it has not many Branches; those it has are tender, and apt to have the lassum collum of the poet bending under the weight of the Flowers; these are very large, and of an exceeding fine glowing crimson, with some tinct of blue among it, which in certain lights gives it a cast of purple.

THERE is something so singular in the separate Flowers of this Plant, that it would not seem strange to give a new generic character, and place it alone under another name; but many things may be perfectly wrong, which would not seem strange. The great apparent singularity in this Plant, is that the Flower is divided only into three Segments, all the others having four or five; and there is another article, which though less obvious, will appear to many yet more important; which is, there are only three Chives, whereas the other Scabious's have four. But in answer to all this, the first glance of the eye would teach the common observer to call it Scabious; and frequent inspection of the Flowers will shew that, though usually they are not always trifid.

THE three Stamina, if regarded, would remove this Plant out of the fourth into the third Class in the sexual system; but the author of that method has not offered so much violence to nature, as to remove this from the other Scabious's, though different from them according to his characters even in Class. He has retained a distinction between the Flowers with five, and those with four Segments, among the Scabious's; but I have not found it permanent enough for such division. They are figured with each Species as they usually appear; but they vary in their division often.

24. ISETENSE SCABIOUS.

Plate 38. Fig. 2.

Character of the Species. Scabiosa Isetensis.

The Flowers spread open like a star; the Leaves are twice winged, and their Leafits are linear.

Fig. 2. *a b.*

THIS is a Perennial, native of Siberia; a very pretty Plant, of ten inches high, flowering in August. The Stalk is pale. The Leaves are of a yellowish green. The Flowers are white.

GENUS

GENUS II. —— If PERMANENT.

NEEDLEWEED.

ACURA.

Character of the Genus.

The Head is convex; and the general Cup is formed of a ſingle range of Films, pointed and edged with hard and bony Thorns, reſembling the ſharp ends of needles.

Plate 38. o. *a b.*

Of this Genus there is known only one Species.

HARP'D NEEDLEWEED.

Plate 39. Fig. 1.

Character of the Species.

The Leaves are harp'd with broad obtuſe Segments.

Fig. 1. *a b.*

THIS is an Annual, a firm, upright Plant of regular growth, flowering in Auguſt; very glowing in the number, and in the colour of its Flowers; but too ſtiff and exact in the diſpoſition of them for beauty. The Stalk is hard and almoſt woody at the baſe, where it is of a reddiſh brown, elſewhere it is green and firm, but without that woody hardneſs. The Leaves are of a good green; and the Flowers are crimſon.

IT grows to two feet and a half in heighth; and toward the top ſends out a multitude of Branches, all if diſtinctly regarded in a proliferous manner. The main Stem is terminated at about two feet heighth by one head, which blows earlier, and is always larger, and compoſed of larger and opener ſeparate Flowers than the others: four Branches uſually riſe from the boſom of the two upper Leaves; and each of theſe is terminated in like manner by one head; and from the joint below this grow two Stalks again. In this manner, and this only, the Branches at the head of the Plant riſe. It is proliferation, though not ſo diſtinctly apparent as in the Scabious thence named,

and

NEEDLE-WEED. ACURA

and ſome others. If I might be allowed a new term; this manner of growth, which is not peculiar to the preſent Plant, ſhould be called Proliferation with a Footſtalk; for take away the Footſtalk of the firſt Flower, and place it ſeſſile on the main Stalk, and every one will ſee the true Proliferation. The caſe is the ſame at the termination of every Branch. We want terms for the diſtinct manner of the diviſions of the Stalks of Plants; it may be well to adopt this.

THE country of this Plant is Italy; if it have any Country diſtinct from my own garden, of which I entertain doubts. It becomes me to deliver them. It's hiſtory will give my reaſons, and every one will be as able as myſelf to judge of them.

IN the autumn of the year 1760, I received from Italy the Seeds of many Plants then newly ripened. When I had ſorted them according to the beſt gueſs I could make as to their kinds, they were ſown in ſuch places as were proper for the expected Plants, according to the diſtribution of this work; and conſequently the Seeds of many Scabiouſes, and of two or three Eryngiums, were ſown near together: for however authors had received from one another the notion of putting Eryngium among the umbelliferous Plants, I had early eſtabliſhed it an Aggregate, as the moſt exact examination ſhews it now to be. Some Scabiouſes and ſome Eryngiums grew from theſe Seeds, and flowered in 1761, but there was nothing ſingular among them. In the ſpring of 1762, I was firſt ſtruck with the appearance of a harp'd Leaf, utterly unknown to me, among the Seedlings: there grew up, and flowered this autumn, the Plant here repreſented; and there ſeem good Seeds formed.

IF I had known ſuch a Plant before, or if any author had deſcribed ſnch a one, it would not have appeared very wonderful to me, that it ſhould appear a ſecond year from ſowing, though not the firſt; for a very little practice in gardening, will ſhew how apt Seeds are to lie dormant a longer time than that: but as I know of no ſuch Plant, and as it appeared only a ſecond ſeaſon; and moſt of all, as it ſeems to me in its aſpect an unnatural Plant, I have ſuſpicions that it is a Mongrel or Muliſh Plant, produced between the flat Eryngio, and ſome one of the Scabiouſes.

WE know theſe mixtures ſometimes happen among Plants; perhaps they are more frequent than we are aware. In general, the Plants produced thus are ſoon loſt, becauſe their Seeds will not grow; but this is not always the caſe. I have been told that the Dittany produced between the Sypline and Cretan, produces Seeds which ſometimes vegetate; and I can ſpeak with certainty of a Plant between the Welch Veronica and the common kind, of which I have many Plants now raiſed from Seed, and living.

WE are not now to learn that a Muliſh Plant may be produced between two Plants of different Genera; but as the mixture is leſs regular, perhaps it is a law of nature that the Seeds of ſuch ſhall not grow: we ſpeak much in the dark of theſe things; for they want much, and have had yet very little obſervation; but from what I have yet ſeen, I think it will be found that among Muliſh Plants, the Seeds of ſuch as are produced between two ſpecies of the ſame Genus, will ſometimes, though but ſeldom, grow; and that by degrees, the new offſpring will loſe all that it had of likeneſs to the female, and be-

come the ſame with the male Plant entirely; on the contrary, that ſuch of the Muliſh Plants, as are produced from a male Plant of one Genus, and a female of another truly diſtinct, never produce Seeds that will vegetate, however fair they may look, and that by theſe means, when the individuals ſo produced periſh, the new Plant is for that time loſt.

UPON theſe principles, uncertain as they may be, I ſhall endeavour to bring the preſent ſubject to a trial. Its own Seeds are carefully ſown in a place diſtinct and diſtant from that where it now grows; and in an experiment-bed deſtined for ſuch purpoſes, the Flat Eryngo, and more than one Scabious, are placed in pairs cloſe together, as if growing from one Root; to aſſiſt, if there be any ſuch, the mixt impregnation.

IF in this place, Plants of this kind ariſe, I ſhall judge it certain that it is Muliſh, and riſes from this accidental mixture; if its Seeds ſown in diſtant ground produce it, and none riſe from the purpoſely aſſociated Plants, I own I ſhall begin to judge it a ſpecies from the creation, a Plant before unknown. In that caſe, it will deſerve the place it holds here; and the rank of a new Genus muſt belong to it: but I exceedingly doubt it; for the Cup, though ſo diſtant from Scabious, ſeems true Eryngo; and the harp'd end of the radical Leaf, together with its hollow Footſtalk, ſeem equally the Flat Eryngo; though its Flowers are plain and abſolute Scabious; and the wingy Segments of that very Leaf, ſeem alſo to belong to a Plant of that kind.

GLOBE-THISTLE. ECHINOPS

Generic Character.

One headed Globe-Thistle.

Many-headed Globe-Thistle.

AGGREGATES.

ORDER V.

Whoſe particular Cup is til'd, or has ſeveral ranges of Segments.

GENUS I.

GLOBE THISTLE.

ECHINOPS.

Character of the Genus.

The Head is globular; the general Cup is compoſed of one range of filmy Segments, and is ſhorter than the Flowers; the ſeparate Flowers are cut into Segments, which turn back at the Points.

Plate 40. o. *a b c.*

1. MANY HEADED GLOBE THISTLE.

Plate 40. Fig. 1.

Character of the Species. Echinops Sphærocephalus.

The Stalk is branched; and ſupports ſeveral Heads of Flowers.

Fig. 1. *a b.*

THIS is a Perennial, native of Spain and Italy, an upright handſome Plant, of a yard or more in height, flowering in July and Auguſt. The Stalk is firm, thick, and brown; the Leaves are of a dark and duſky green on the upper ſide: but whitiſh and hoary underneath. The Flowers are naturally of a blueiſh white, ſometimes they are white entirely; and ſometimes they are crimſon: this is the moſt beautiful, but the leaſt uſual ſtate of the plant.

2. ONE HEADED GLOBE THISTLE.

Plate 40. Fig. 2.

Character of the Species. Echinops Ritro.

The Stalk is ſimple; and ſupports only one Head of Flowers.

Fig. 2. *a b.*

THIS is a Perennial, native of Italy, and the South of France, a very handſome Plant, flowering in Auguſt. It grows to two feet and a half in heighth. The Stalk is rib'd, firm, of a greeniſh white; and in the wild ſtate is deſtitute of branches; in gardens it has often more than one; but in this caſe, each Branch ſupports only one Flower, ſo that the character of the ſpecies is yet kept diſtinct; the Leaves are of a pale but pleaſant green on the upper ſide, and white underneath. The Flowers are of a very beautiful blue. The ſeparate Flowers and general Heads, vary conſiderably in ſize; they are twice as big in gardens as we ſee them in wild nature.

GENUS

GENUS II.

CLUSTER THISTLE.

RUTHRUM.

Character of the Genus.

The Heads are cylindrick; and many ſtand cluſtered together. The general Cup is compoſed of two ranges of leafy Segments. The ſeparate Flowers are cut into five ſlender Segments.

Plate 41. o. *a b.*

1. PINNATIFID CLUSTER THISTLE.

Plate 41. Fig. 1.

Character of the Species. Echinops Strigoſus.

The Leaves are pinnatifid, with wav'd Segments.

Fig. 1. *a b.*

THIS is an Annual, native of Spain, and of the South of France, a very pretty Plant, flowering in July and Auguſt. The Stalk is white, firm, upright, and but little branched; and grows to two feet high. The Leaves are of a pale whitiſh green on the upper ſide, with ſome ſtiff hairs upon them. They are altogether white underneath, and weakly thorny at the point. The Flowers are of a very pale, but very elegant blue; not unlike the colour we ſee in what are called Water Sapphires by the Jewellers, in which there ſeems a milky whiteneſs ſuffus'd among a good blue.

HERMAN underſtood this Plant to be a Scabious; we ſee the utility of obſerving the ſeparate Cups, and the propriety of forming a diſtinction upon their ſtructure, ſuperior to Genus, though below a Claſs.

2. DOUBLY PINNATIFID CLUSTER THISTLE.

Plate 41. Fig. 2.

Character of the Species. Echinops Corymboſus.

The Leaves are doubly pinnatifid; with irregularly cut Segments.

Fig. 2. *a b.*

This is a Perennial, native of the Greek iſlands, and of many parts of Europe, as Italy and the South of France; a robuſt and handſome, though rough-looking Plant, flowering in Auguſt. The Leaves are broad, and of a deep green; but their Ribs uſually are whitiſh. The Stalk is green, irregularly branched, and two feet high. The Flowers are numerous, and of a deep and perfectly fine blue. They crown the ſpreading Head of the Plant profuſely, and laſt a long time in their beauty.

GENUS

CLUSTER-THISTLE. RUTHRUM

Generic Character.

Pinnatifi'd Cluster Thistle.

Double Pinnatifi'd Cluster Thistle?

CUMMIN-WEED. LAGOECIA

Generic Character.

Wing'd Cummin-weed.

GENUS III.

CUMMIN-WEED.

LAGOECIA.

Character of the Genus.

The Head is nearly globular; but a little inclining to oval [a]. The general Cup is compoſed of two Ranges of Segments, feathery at the ends [b]. The ſeparate Cup [c] is compoſed of three Ranges of feathery Segments; the outermoſt conſiſting of four [d], the next of three [e], and the innermoſt of two [f]. The ſeparate Flower is compoſed of five Petals ſplit at the ends [g].

Plate 42. o. *a b.* c d e f g.

Of this Genus we know only one Species.

WINGED CUMMIN-WEED.

Plate 42.

Character of the Species. Lagoecia Cuminoides.

The Leaves are wing'd; and their Leafits are indented.

Fig. 1. *a b.*

THIS is an Annual, a ſmall and inconſiderable, but moſt extreamly ſingular Plant, native of the Greek iſlands, and of ſome of the warmer parts of Europe; flowering in May and June. The Stalk is weak, round, of a pale green, and toward the top, branches out wildly. The Leaves are of a faint, and ſomewhat whitiſh green. The Flowers are white, with a ſlight tinge of green or yellowiſh; ſometimes, and indeed always in Greece, white entirely.

THIS is one of thoſe Plants which has perplexed moſt of the writers in Botany where to place it. The name of Cummin-weed or wild Cummin, given it by our old Engliſh writers, like that of Cuminoides, by thoſe of a ſomewhat higher Claſs in other languages, ſhew how very ill they judged of it: the more accurate have been extreamly perplexed about its ſeparate Cup, which is the great article for finding its true place under a proper claſſical diſtribution. They have ſuppoſed it to be two diſtinct bodies, but it is in nature only one: the parts of which it is compoſed, riſe all from one common baſe; and it differs from the Cup of the Globe Thiſtle, only in the Films ſtanding more remote. None will doubt the ſeparate Cup in that Plant being imbricated; nor ought they therefore to doubt the ſame of this.

AGGREGATES.

ORDER VI.

Whoſe particular Cup is formed only of one oval hollow Leaf.

GENUS I.

BIRDWEED.

SIGESBECKIA.

Character of the Genus.

The Head is flat, looſe, and compoſed of few Flowers. The general Cup is longer than the Flowers, and conſiſts of five oblong Leaves in a ſingle Range. The ſeparate Flowers are tubular, and cut into five parts; and there are outer Ranges flat, and cut into three.

Plate 43. *a b.*

1. SIMPLE LEAV'D BIRDWEED.

Plate 43. Fig. 1.

Character of the Species. Sigeſbeckia Orientalis.

The Leaves have Footſtalks which riſe ſimple and naked from the Stem.

Fig. 1. *a b.*

THIS is an Annual, native of China, and the Indies; a Plant of more ſingularity than beauty, flowering in July and Auguſt. The Stalk is browniſh, firm, and more than a yard in heighth. The Leaves are of a bright green; the Flowers are yellow; the Cup is alſo yellowiſh, and its glandular hairs are brown.

2. ALATED BIRDWEED.

Plate 43. Fig. 2.

Character of the Species. Sigeſbeckia Occidentalis.

The Leaves have winged Footſtalks, which run down the Stem.

Fig. 2. *a b.*

THIS is a Biennial, native of Virginia and Carolina; a ſingular and not inelegant Plant; flowering in July. The Stalk is of a reddiſh brown, but edg'd with green from the Footſtalks of the Leaves in a very pretty manner. It grows to near two feet in heighth. The Leaves are of a dark green; and the Flowers are yellow. The Heads in this Species are apt to drop their outer Cups, as ſome of the Radiate Flowers do their Rays. 'Tis neceſſary to name this; or it might perplex the ſtudent.

THESE are Plants of that kind, which naturally perplex the inventors of artificial ſyſtems; for they carry the proper marks of different Claſſes: but they are of infinite value in the method of nature. They are the frontier kinds, between the Radiate and Aggregate Plants, joining the two Claſſes, but belonging diſtinctively to neither. They have the marks of both; and we have repeated them under each. They belong to the Radiates by the union of their Chives; to the Aggregates, by their general and ſeparate

BIRD-WEED. SIGESBECKIA

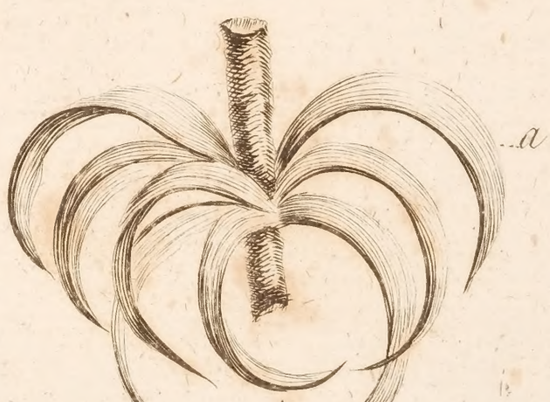
Generic Character.

Simple leav'd Bird weed.

Alated Bird weed.

Generic Character.

Heathy Crownwort.



AGGREGATES.

ORDER VII.

Whoſe particular Cup is formed of ſeveral oval hollow'd Leaves.

GENUS I.

CROWNWORT.

STOEBE.

Character of the Genus.

The Head is oval. The general Cup is formed of two ranges of leafy Segments; which are ſoft, wavy, and ſharp pointed. The ſeparate Flowers are tubular, with a ſpreading Rim cut into five ſhort Segments.

Plate 44. o. *a b.*

Of this Genus we know but one Species.

1. HEATHY CROWNWORT.

Plate 44. Fig. 1.

Character of the Species: Stœbe Æthiopica.

The Leaves are linear, cluſtered together on the Stalk, and drooping at their Points.

Fig. 1. *a b.*

THIS is a Perennial, native of the Cape of Good Hope; a very odd looking Plant, but of no great beauty; flowering in July and Auguſt. It grows to two Feet and a half in heighth; the main Stem is brown and woody; the young Shoots are of a greyiſh white; the Leaves are of a pale grey alſo, with ſcarce any tinge of green. The Flowers are yellow. They are not very conſpicuous; for neither they nor the Heads are large, but when cloſely examined they are ſeen very prettily diſpoſed: they cover the exterior part of the Head in little yellow ſhining ſtars, which are every where intermixed with ſmall ſilvery ſcales. Theſe are only little Films from the receptacle, ſuch as may be found in moſt of the Aggregate Claſs, ſeparating Flower from Flower; but in theſe Plants, their large ſize and ſilvery appearance, makes them more obſervable. Let none wonder they are not named in the character of the Genus; a Plant may be a true Stœbe without them; and in other inſtances, their variations are ſo great, and their preſence, or abſence of ſo little import, that they have no proper place in ſuch characters: for the ſhorter theſe are, ſo they be perfectly diſtinct, the better.

GENUS

GENUS II.

THREADWORT.

BRUNIA.

Character of the Genus.

The Head is convex; the general Cup is hemiſpheric, and compoſed of a great number of oval pointed Scales in many ranges. The ſeparate Flowers are formed of five Petals, narrow at the Baſe, and ſpreading at the Rim.

Plate 45. o. *a b c.*

1. JOINTED THREADWORT.

Plate 45. Fig. 1.

Character of the Species. Brunia Nodiflora.

The Leaves grow in fours, ſurrounding the Stalk, and forming the appearance of a kind of Joints.

Fig. 1. *a b.*

THIS is a Perennial, native of the Cape of Good Hope; a very beautiful, though low Plant, flowering in June and July. It grows to more than two feet in heighth; but the Stem is weak, though woody at the baſe, and uſually leans for ſome part of its length upon the ground. It is brown or reddiſh in that part, but elſewhere pale and greeniſh. The Leaves are of a very ſtrong and fine green; the Flowers are of a fine, though pale crimſon, abundantly making up in the elegance of colour what is wanting in its ſtrength.

2. DOWNY THREADWORT.

Plate 45. Fig. 2.

Character of the Species. Brunia Lanuginoſa.

The Leaves are linear; and ſpread away from the Stem.

Fig. 2. *a b.*

THIS is alſo a Perennial, native of the Cape of Good Hope; a weak, but woody Plant, of two feet high; flowering in Auguſt. The Stem is tinged with crimſon; the young Shoots are white and downy. The Leaves are of a whitiſh green; and covered lightly with the ſame white Down. The Flowers are of a ſtrong and glowing crimſon. They are ſo numerous, that they give a wonderful grace and beauty to the Plant above its fellows. It naturally ſpreads out into a number of Branches toward the top, all covered with bloom; and theſe joining give the appearance of a vaſt crimſon Umbell.

3. EYELASH'D

THREAD-WORT. BRUNIA

Generic Character.

Jointed Thread-wort?

Downy Thread-wort?

2

Eyelash'd Thread-wort.

Scaly Thread-wort?

3. EYELASH'D THREADWORT.

Plate 46. Fig. 1.

Character of the Species.

Brunia Ciliata.

The Leaves are lanc'd, and have a range of ſtiff and firm Hairs, like thoſe of the Eyelaſhes, ſurrounding them upon the edge.

Fig. 1. *a b.*

THIS is a Perennial, woody Plant, native of the ſides of hills about the Cape of Good Hope, which it in a manner covers in ſome places for many acres together, as heath does our Commons, and ſpreads over them for many months a continual glow of fleſhy crimſon. The Stem is brown and tough, and uſually lies upon the ſlanting ground for the greateſt part of its length. The young Shoots are tender, and of a pale green; and theſe riſe a foot and a half or more from the ground. The Leaves are of a bright, but pale green; and the Flowers are of the fainteſt crimſon that can be conceived; but this is a very pretty colour: it is neareſt what our gardeners call the Maiden's Bluſh in certain Roſes and other Flowers, of any thing in Europe; but it is truly altogether ſingular; and the Flowers have a colour as well as form perfectly unknown to us here. It flowers in July and Auguſt.

4. SCALY THREADWORT.

Plate 46. Fig. 2.

Character of the Species.

Brunia Abrotanoides.

The Leaves are lanc'd; and they cover the Stalk like ſcales of fiſhes.

Fig. 2. *a b.*

THIS is alſo a Perennial, woody Plant, native of the Cape; and of very ſingular beauty. The Stem is brown; the Branches are crimſon; but they are in moſt places ſo covered with Leaves, that it is ſcarcely ſeen; theſe are of a dead whitiſh green. The Heads are larger than in any other of this Genus; and the Flowers are blue; their colour, like that of the former, is ſcarce to be deſcribed; and is ſo unlike all that we uſually ſee under that name in the Flowers of Plants, that the firſt ſight of it aſtoniſhes and confounds one. It is a very pale blue, and ſeems throughout ſuffuſed with white; but there is a delicacy in its paleneſs, quite different from all we are acquainted with, except among the Gemms; for there are certain pale ſapphires like it; but theſe muſt be yet paler and brighter to anſwer the reſemblance, than thoſe mentioned on a former like occaſion. It flowers in its native ſoil the greateſt part of the year; with us in Auguſt.

5. WOOLLY THREADWORT.

Plate 47.

Character of the Species. Brunia Leviſana.

The Leaves are oval and obtuſe; and they are covered with an exceeding fine ſhort woolly matter.

Plate 47. *a.*

THIS is a Perennial, woody Plant, as the four preceding, native of the ſame place, and, like them, of very great beauty. We admire many things from the Cape of Good Hope; but ſcarce any deſerve that admiration more than theſe. The Stem of this is uſually brown, with a tinge of crimſon. It lies upon the ground in part; and what riſes up ſeldom exceeds a foot and a half in heighth. The Branches are innumerable; they are crimſon, but it is a colour rarely ſeen, the Leaves cover them ſo entirely; they ſpread widely and wildly toward the top, and one Plant will thus afford a crown of three feet ſquare, ſet looſely and irregularly, but very beautifully, with vaſt Heads of Flowers. The Leaves are white, and ſoft to the touch; the downy matter with which they are covered, is more ſenſible to feeling than to ſight. The Flowers are of a very fine, but light crimſon.

ABOUT three years ago, I received from the Cape, a Branch of this with the Leaves perfectly ſmooth, deſtitute altogether of that downy matter I had before ſeen upon them, but in all reſpects elſe perfectly the ſame. It is an accident not peculiar to this Plant, but has been ſeen on many of the Cape products; Burman alſo mentions it on this occaſion. Let the ſtudent who has opportunity of obtaining Plants from that part of the world, be upon his guard, not be deceived by it; he may fancy many ſpecies, where there is but one, merely from this variety.

GENUS

Woolly Thread-wort?

ERYNGO. ERYNGIUM

Generic Character.

Trifid Eryngo.

GENUS III.

ERYNGO.

ERYNGIUM.

Character of the Genus.

The Head is oval, compact, and formed of many Flowers. The general Cup is longer than the Flowers; and is compoſed of ſix thorny Leaves. The ſeparate Flowers are compoſed each of five oblong Petals, turning back at the end.

Plate 48. o. *a b.*

1. TRIFID ERYNGO.

Plate 48. Fig. 1.

COMMON ERYNGO.

Character of the Species. Eryngium Campeſtre.

The firſt Leaves from the Root are oval and undivided; only wav'd at the edge; the reſt are pinnatifid, and terminate in three points.

Fig. 1. *a b.*

THIS is a Perennial, native of our way ſides in ſome parts of England; and to the diſtreſs of farmers, alſo of our corn-fields; where, when once in poſſeſſion, it is very hardly got out, for the Roots are very difficultly broken, and every piece will grow. The Plant is near a yard high, and branches into a multitude of ſpreading twigs; theſe are of a pale green. The Leaves are very handſomely cut; and what forms the trifid end of them, is no more than the two extream ſide Segments, growing to that at the end. Their colour is a pale yellowiſh green, faint but not diſagreeable. The Flowers are blue, but it is not a fine or pleaſing colour; and ſometimes they become of the mere colour of the Leaves, a yellowiſh green. They blow from June to September.

THIS is the Plant whoſe Roots are celebrated in medicine, and they deſerve all the praiſe that has been given them. They are excellent in all diſorders ariſing from obſtruction: I have ſeen the jaundice cured by them alone; and in the gravel they are ſafe and excellent; as alſo againſt aſthmas, and other diſorders of the breaſt and lungs; but they trifle who eat them candy'd for this purpoſe; the virtue is loſt in the preparation.

IT has been a cuſtom to range the Eryngium among the Umbelliferous Plants. Our reaſon for placing it among the Aggregates, needs no other authority than the view of the Head, or the compariſon of its Figure here, with thoſe of Scabious and Dipſacus, the avowed Heads of the Aggregate Claſs.

2. FOLDED ERYNGO.

Plate 49. Fig. 1.

SEA HOLLY.

Character of the Species. Eryngium Maritimum.

The Leaves are wav'd, and thorny at the edges; the lower ones are roundiſh, and elegantly plaited in regular folds.

Fig. 1. *a b.*

THIS is a Perennial, native of our ſea-coaſts in moſt parts of the iſland; and like the preceding kind, common alſo to almoſt every part of Europe. It is a robuſt Plant, of a foot and a half high; and flowers in June. The Stalk is round, thick, firm, and hard. It is reddiſh toward the baſe, but of a blueiſh green upwards; the Leaves are alſo of a blueiſh green, but with blackiſh thorns; and they are thick and fleſhy. The Flowers are of a pale blue, not much differing from the colour of the reſt of the Plant, but more bright and ſhining.

THE Root of this ſpecies has the ſame virtues with that of the preceding, but in an inferior degree. The antients eat the tender Leaves of both, as they did of the Burdock, and many of the Thiſtles.

3. FLAT ERYNGO.

Plate 49. Fig. 2.

Character of the Species. Eryngium Planum.

The radical Leaves are all ſimple, flat, lightly wav'd or nick'd at the edges, and have hollow Footſtalks. The Heads are plac'd on Footſtalks.

Fig. 2. *a b.*

THIS is a Perennial, native of Swiſſerland, and moſt other parts of Europe; a tall, handſome Plant, of regular growth and ſingularly pleaſing appearance; flowering in July and Auguſt. The Stalk is a yard high; tough and firm; very gloſſy on the ſurface; naturally of a faint and ſimple green, but ſometimes of a ſhining blue, and ſometimes of a ſhining white; in either of which ſtates it is very beautiful. It riſes ſingle from the ground; but ſpreads into a large, though compact head; its growth from the firſt Flower being what we have called Proliferous, with a Footſtalk, as in moſt other of the Eryngos, The Leaves are as the Stalks in colour, pale green, blueiſh or whitiſh; and ſo it is with the Flowers: they are fineſt of all when blue. Theſe variations in colour are very ſtriking at firſt ſight; but the Plant is perfectly and entirely the ſame in all. They have done idly who gave the ſeveral appearances names; Eryngium planum viride; planum cæruleum; planum album; for there is not the leaſt difference elſe in the ſeveral Plants.

ERYNGO ERYNGIUM

Folded Eryngo.

Flat Eryngo.

ERYNGO. ERINGIUM

3

Sword leav'd Eryngo.

Needle Eryngo.

4. SWORD LEAV'D ERYNGO.

Plate 50. Fig. 1.

Character of the Species. Eryngium Fœtidum.

The Leaves are oblong, ſword-ſhap'd, ſaw'd and thorny. Thoſe on the lower part of the Plant are ſimple; thoſe toward the top divided.

Fig. 1. *a b.*

THIS is a Perennial, native of North and South America, common to Canada and Jamaica, to Penſylvania and Peru. We are accuſtomed to receive it from Jamaica, and have therefore placed it in ſtoves; but the Plant will live and thrive in open ground. It grows to a foot and a half high. The Stalk is weak, but tough; of a reddiſh green toward the baſe, and pale upwards. The Leaves are alſo of a pale green; and when bruiſed have an unpleaſing ſcent. The Flowers are ſmall and white.

IT is worth while to raiſe this Plant in quantity to try its virtues. The Indians, who have taught us more and better medicines, than we ever taught ourſelves, call it by a name that expreſſes Fever Plant: our people in the colonies have learnt its uſe from them, and extol it highly; but I don't know that it has ever been try'd in England.

5 NEEDLE ERYNGO.

Plate 50. Fig. 2.

Character of the Species. Eryngium Aquaticum.

The Leaves are lanc'd, ſerrated, and terminate in a ſtrong and ſlender Spine, like a needle. They retain their undivided form to the top.

Fig. 2. *a b.*

THIS is a Perennial, native of Virginia, and other parts of North America; an upright, but not very beautiful Plant; flowering in July. The Stalk riſes to near two feet in heighth, and is tough, firm, ſmooth, and pale. The Leaves are of a greyiſh green; and have a thick fleſhy ſubſtance. The Flowers are white.

THIS is another of the Plants famous among the natives of America for its medicinal qualities. They call it by a name which ſignifies Rattle-Snake Weed. There are ſeveral Plants which they ſuppoſe to have the virtue of curing thoſe who are bitten by venemous ſerpents, and this is one, and not the leaſt reſpected among them. It is not ſtrange their firſt phyſic ſhould be for the cure of bites of venomous creatures: their life in the woods made them always liable to thoſe accidents.

6. PALMATED ERYNGO.

Plate 51. Fig. 1.

Character of the Species. Eryngium Tricuſpidatum.

The radical Leaves are heart-ſhap'd; and wav'd along the edges. Thoſe on the Stalk are palmated and curl'd.

Fig. 1. *a b.*

THIS is a Perennial, native of North America; a tall and handſome Plant, flowering in Auguſt. The Stalk is two feet and a half high, firm, tough, upright, and, toward the top, ſpreads out into a great many Branches. It is of a pale, greyiſh green, and ſmooth on the ſurface, naturally ſhining. The Leaves are of a pale, greyiſh green, with ſome little tinge of yellowiſh; the Flowers are nearly white.

THOSE who ſearch for marks of diſtinction among the more minute and inconſpicuous, or at leaſt unobvious parts of Plants, may find one in the Head of this Eryngo; by which, if they pleaſe, they may ſeparate it from the reſt, and make of it a new Genus. The Heads of all the Plants of this kind, have a kind of chaffy Films placed between the Flowers. Thoſe in the generality are ſimple, but in this Species they terminate in three points.

IT is not of any importance to the Plant, or to its generic Character, whether there were any of theſe Chaffs or not among the Flowers, as has been obſerved in ſpeaking of the Stœbe: much leſs need we in that character regard their form. I do not know that any has yet ſeparated this from the Eryngo's on that occaſion; for the Plant is little known: I only name the impropriety of ſuch ſeparations, of which we have inſtances on leſs cauſes even than this; and would have the ſtudent keep always in mind, that little regard is to be ſhewn to little parts; and that, when other things are equal, the moſt conſpicuous marks are always beſt.

7. FORKED

ERYNGO. 4 ERYNGIUM

Palmated Eryngo.

ERYNGO. 5 ERYNGIUM ?

Fork'd Eryngo.

Tender Eryngo.

7. FORKED ERYNGO.

Plate 52. Fig. 1.

Character of the Species. Eryngium Pusillum.

The Stalk splits forkwise into two at the Head; the Leaves are lanc'd and serrated.

Fig. 1. *a b c.*

THIS is a Perennial, native of Spain and Italy; a low Plant, of no great beauty; flowering in July and August. The Stalk is round, tough, of a pale green; and lies in part upon the ground. It seldom grows to more than a foot in heighth; and its colour is a pale whitish green. The Leaves are of a bright and pleasing green. The Flowers are of a blueish white; they are not large; but they sit so close upon the Stalk, that their singularity gives them an aspect of prettiness, which generally makes the Plant taken notice of among such as are handsomer.

8. TENDER ERYNGO.

Plate 52. Fig. 2.

Character of the Species. Eryngium Alpinum.

The Stalks are weak; the lower Leaves are heart-shap'd, and saw'd at the edge; the others are pinnatifid with a broad base.

Fig. 2. *a b c.*

THIS is a Perennial, native of the mountains of Swisserland, and of some other parts of Europe; a very pretty Plant, of a foot and a half or more in heighth; flowering in July. The Stalk is tough, but weak. It naturally bends, but does not easily break; the Leaves are of a faint green; the upper ones are of a firm substance, and are thorny at the ends and points of the divisions. The Flowers are of a very fine blue, and make a handsome figure at the tops of the Branches, part of which is usually ting'd to some distance below them, with the same glowing colour.

THE Root of this kind, when dry'd, has a very fine aromatic flavour, light and without heat. It resembles the taste of the common Eryngo Root, but is vastly more delicate. The Plant is common enough where it is native; and it would be worth while to import a quantity of its Root for trial in medicine.

9. AMETHYSTINE ERYNGO.

Plate 53. Fig. 1.

Eryngium Amethyſtinum.

Character of the Species.

The lower leaves are handed, and in the circumference nearly round; they are compoſed of many plaited and thorned diviſions.

Fig. 1. *a b.*

THIS is a Perennial, native of the Apennines; an upright, robuſt, and very beautiful Plant, of two feet high; flowering in June and July. The firſt or lower Leaves, are of a very fine, though pale green, with white ribs, hard, ſolid, and gloſſy; and have often a blotchy mixture of a deeper green, ſo that they have a variegated aſpect. The Stalk is upright, thick, tough, and firm; it riſes ſingle, and does not branch much, till near the top; where it throws out a great many Shoots, which form together a thick and large Head. Theſe Branches, and a part, if not the whole of the Stem, for this depends on accidents, are of the moſt delicate colour that can be imagined. It is blue with a mixture of purple; a tinct too glowing, and too fine to be deſcribed, otherwiſe than by the alluſion to that Gem from which the Plant takes its name; for it is of the hue and luſtre of the moſt perfect Amethyſts. In its native place, the Plant is always coloured thus in the Stalk to the ground; with us, where too rich a ſoil gives it more heighth and largeneſs, the lower part is white; and where this is the caſe, the colour of the top is not ſo glowing. When this glow is perfect, it is a Plant to be ſeen and admired from a diſtance; and more ſo, every ſtep that one advances to it. The Flowers are of a fine blue, with ſomewhat of the amethyſtine tinge; but their colour is not nearly ſo bright as that of the Stalk.

FINIS.

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Amethystine Eryngo.

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